NEW YORK STATE OF OPPORTUNITY.

South Shore Estuary Reserve

Appendices

Long Island South Shore Estuary Reserve Comprehensive Management Plan 2022

Kathy Hochul, Governor
Robert J. Rodriguez, Secretary of State

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Appendix 1:
Available Funding to Assist with Implementation of the Comprehensive Management Plan

The following section includes a number of federal, state, and local funding opportunities that may be used to implement the South Shore Estuary Reserve Comprehensive Management Plan. The list below provides several funding sources and links for additional information on where communities and stakeholders can go to learn more. This list does not include every potential source of funding. Communities and stakeholders are encouraged to conduct their own research when identifying potential source(s) of funding that could support the implementation of the CMP.

Federal Funding Opportunities

U.S. Department of Homeland Security, Federal Emergency Management Agency (FEMA)

Building Resilient Infrastructure and Communities

Building Resilient Infrastructure and Communities (BRIC) supports states, local communities, tribes and territories as they undertake hazard mitigation projects that reduce the risks they face from disasters and natural hazards.

Program information can be found at: https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities

Flood Mitigation Assistance Grants

The Flood Mitigation Assistance grants are available to implement measures to reduce or eliminate risk of flood damage to structures insured by the National Flood Insurance Program. Eligible applicants are states, Territories, federally recognized tribes and local communities.

Program information can be found at: https://www.fema.gov/grants/mitigation/floods

U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA)

The Coastal and Estuarine Land Conservation Program

The Coastal and Estuarine Land Conservation Program provides matching funds to state and local governments to purchase threatened coastal and estuarine lands or obtain conservation easements. To be considered, the land must be important ecologically or possess other coastal conservation values, such as historic features, scenic views or recreational opportunities.

Program information can be found at:
https://coast.noaa.gov/czm/landconservation/?redirect=301ocm

Coastal Resilience Grants

This competitive grant program funds projects that are helping coastal communities and ecosystems prepare for and recover from extreme weather events, climate hazards, and changing ocean conditions. Applicants include state and local government agencies and nonprofits. Funds are

provided to improve a region's ability to prepare for and recover from a variety of coastal threats, including hurricanes, tsunamis, and sea level rise. Project focus areas include flood protection, infrastructure improvement, restoration of coastal habitat and proactive community planning initiatives. The emphasis is on protecting life and property, safeguarding people and infrastructure, strengthening the economy, and conserving and restoring coastal and marine resources.

Program information can be found at: https://coast.noaa.gov/resilience-grant/

Marine Debris Removal Program

This program supports the development and implementation of locally driven, marine debris prevention, assessment, and removal projects that benefit coastal habitat, waterways, and NOAA trust resources. Successful proposals will be funded through cooperative agreements. Typical awards will range from $50,000 to $150,000. Eligible applicants are state, local, and tribal governments whose activities affect research or regulation of marine debris and any institution of higher education, nonprofit organization, or commercial (for-profit) organization with expertise in a field related to marine debris.

Program information can be found at: https://marinedebris.noaa.gov/funding/funding-opportunities

Marine Debris Prevention Program

This program is focused on and provides funding for efforts to prevent marine debris from entering the marine and coastal environment through targeted behavior change. It is not intended for large-scale debris removal projects, deployment of catchment basins or scientific research. Successful proposals will be funded through cooperative agreements. Typical awards will range from $50,000 - $150,000. Eligible applicants are state, local and tribal governments whose activities affect research or regulation of marine debris and any institution of higher education, nonprofit organization or commercial (for-profit) Federal organization with expertise in a field related to marine debris.

Program information can be found at: https://marinedebris.noaa.gov/funding/funding-opportunities

The Saltonstall-Kennedy (S-K) Grant Program

The National Marine Fisheries Service provides funding to demonstrate direct benefits to U.S. fishing industries and encourages proposals that involve fishing community participation. U.S. fisheries include any fishery, commercial or recreational, that is, or may be, engaged in by citizens or nationals of the United States. Successful applications will be those aimed at helping fishing communities to resolve issues that affect their ability to fish; making full use of those species that are currently under Federal or state fishery management plans; and addressing the socioeconomic impacts of overfishing and overcapacity. Priorities include marine aquaculture; adapting to environmental changes and other long term impacts in marine ecosystems; promotion, development and marketing; territorial science; and fishing community resiliency. Eligible applicants include individuals, industry, academia and state and local governments.

Program information can be found at: http://www.nmfs.noaa.gov/mb/financial_services/skhome.htm?utm_medium=email&utm_source=govdelivery

U.S. Environmental Protection Agency (EPA)

Source Reduction Assistance Grant Program

The Source Reduction Assistance Grant Program provides support for pollution prevention through source reduction and resource conservation work. As authorized under the statutory authorities for this grant program, proposals must carry out project activities using one or more of the following methods – surveys, studies, research, investigation, experimentation, education, training and/or demonstrations. Eligible entities are states, any territory or possession of the United States, local governments, city or township governments, independent school district governments, state controlled institutions of higher education, nonprofit organizations (other than institutions of higher education), private institutions of higher education, community-based grassroots organizations and federally-recognized tribes and intertribal consortia.

Program information can be found at: https://www.epa.gov/p2/grant-programs-pollution-prevention

Water Research Grants

EPA Water Research Grants are made available to support the science and tools necessary to develop sustainable solutions to 21st century water resource problems, ensuring water quality and availability to protect human and ecosystem health. Eligible to academic institutions.

Program information can be found at: https://www.epa.gov/research-grants/water-research-grants

Urban Waters Small Grants Program

The program recognizes that healthy and accessible urban waters can help grow local businesses and enhance educational, recreational, social, and employment opportunities in nearby communities. Eligible applicants include States, local governments, Indian Tribes, public and private universities and colleges, public or private non-profit institutions/organizations, intertribal consortia and interstate agencies. In general, projects should meet the following four program objectives: 1) Address local water quality issues related to urban runoff pollution; 2) Provide additional community benefits; 3) Actively engage underserved communities; and 4) Foster partnership. The program is available every two years.

Program information can be found at: http://www2.epa.gov/urbanwaters/urban-waters-small-grants

Environmental Education (EE) Grants

The program supports environmental education projects that promote environmental awareness and stewardship and help provide people with the skills to take responsible actions to protect the environment. This grant program provides financial support for projects that design, demonstrate, and/or disseminate environmental education practices, methods or techniques. Eligible applicants include local education agencies, state education or environmental agencies, colleges or universities, non-profit organizations, noncommercial educational broadcasting entities and tribal education agencies.

Program information can be found at: https://www.epa.gov/education/environmental-education-ee-grants

U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS)

Agricultural Conservation Easement Program

The Agricultural Conservation Easement Program provides financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits. Eligible applicants include: federally recognized tribes, state and local governments and non-governmental organizations.

Program information can be found at:
https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/acep/

U.S. Department of the Interior, U.S. Fish and Wildlife Service (FWS)

North American Wetlands Conservation Act Grant Program

North American Wetlands Conservation Act Grant Program (NAWCA) provides grants to increase bird populations and wetland habitat, while supporting local economies and American traditions such as hunting, fishing, birdwatching, family farming and cattle ranching. Wetlands protected by the NAWCA provide valuable benefits such as flood control, reducing coastal erosion, improving water and air quality, and recharging ground water. The program operates with two grant cycles per year. Eligible applicants are private or public organizations or to individuals who have developed partnerships to carry out wetlands conservation projects in the U.S., Canada, and Mexico.

Program information can be found at: https://www.fws.gov/birds/grants/north-american-wetland-conservation-act.php

USFWS National Coastal Wetlands Conservation Grants

The Coastal Wetlands Conservation Grants provide funding to acquire, restore, and enhance wetlands in coastal areas through a competitive process. Eligible applicants include: State, Commonwealth, and Territory (State) agencies.

Program information can be found at: https://www.fws.gov/coastal/CoastalGrants/index.html

Partners for Fish and Wildlife Program

The Partners for Fish and Wildlife (PFW) Program is a voluntary, incentive-based program that provides direct technical assistance and financial assistance in the form of cooperative agreements to private landowners to restore and conserve fish and wildlife habitat for the benefit of federal trust resources.

Eligible applicants include: County governments; Individuals; Nonprofits that do not have a 501(c)(3) status with the IRS, other than institutions of higher education; City or township governments; Small businesses; Native American tribal organizations (other than Federally recognized tribal governments); Public and State controlled institutions of higher education; Private institutions of higher education; State governments; Nonprofits having a 501(c)(3) status with the IRS, other than institutions of higher education; For profit organizations other than small businesses; Native American tribal governments (Federally recognized).

Program information can be found at: https://www.fws.gov/partners/faq.html

New York State Funding Opportunities

Department of State (NYSDOS)

Local Waterfront Revitalization Program (LWRP)

The Department of State's Environmental Protection Fund Local Waterfront Revitalization Program provides grants on a competitive basis to eligible villages, towns, cities, and counties (with the consent and on acting on behalf of one or more villages, towns or cities) located along New York's coasts or designated inland waterways to revitalize communities and waterfronts through planning, design, and construction projects, with design and construction eligibility tied to prior planning. Construction projects must be on public property, or where a permanent public interest, such as easement, has been established.

Program information can be found at: https://dos.ny.gov/local-waterfront-revitalization-program

New York State Department of Environmental Conservation (NYSDEC)

Water Quality Improvement Project Program (WQIP)

The Water Quality Improvement Project (WQIP) program funds projects that directly address documented water quality impairments. Eligible types of projects may include: 1) Wastewater Treatment Improvement; 2) Non-agricultural Nonpoint Source Abatement and Control; 3) Land Acquisition Projects for Source Water Protection; 4) Salt Storage; 5) Aquatic Habitat Restoration; and 6) Municipal Separate Storm Sewer Systems (MS4s).

Program information can be found at: http://www.dec.ny.gov/pubs/4774.html

Engineering Planning Grants (EPG)

The New York State Department of Environmental Conservation (NYSDEC), in conjunction with the New York State Environmental Facilities Corporation (NYSEFC), offers grants to municipalities to help pay for the initial planning of eligible Clean Water State Revolving Fund (CWSRF) water quality projects. Funding can be used by municipalities for the preparation of an engineering report and planning activities to determine the scope of water quality issues, evaluate alternatives and propose a capital improvement project. In addition, the costs to conduct an environmental review for the recommended alternative in the report are eligible.

Program information can be found at: http://www.dec.ny.gov/pubs/81196.html

Community Impact Grants Program

The Community Impact Grants Program provides community-based organizations with funding for projects to address various environmental and public health concerns. The program focuses on low-income and minority communities that have historically been burdened by environmental problems including: a large number of regulated facilities; contaminated sites; noise, air and water pollution; health problems and lack of green space and waterfront access. The Community Impact Grants empower stakeholders to be actively engaged in finding solutions to the disproportionate burdens that Environmental Justice communities may experience.

Program information can be found at: http://www.dec.ny.gov/public/31226.html

Urban and Community Forestry Program Cost Share Grants

The program provides assistance to communities with comprehensive planning, management, and education to create healthy urban and community forests. Eligible project categories include tree inventories and management plans, tree planting, maintenance and educational programming. Funds are made available from the Environmental Protection Fund.

Program information can be found at: http://www.dec.ny.gov/lands/5285.html

Trees for Tribs Grant Program

The purpose of this grant program is to support the reforesting of riparian (streamside) buffers throughout New York State to prevent erosion, stabilize streambanks, increase flood water retention, improve wildlife and stream habitat, and protect water quality. Grant funds are available through the Environmental Protection Fund and are managed and allocated by NYSDEC's *Trees for Tribs* Program. Project proposals are evaluated for cost effectiveness, use of recommended standards in implementation, local support, and regional impact.

Program information can be found at: https://www.dec.ny.gov/animals/113412.html

NYS Environmental Facilities Corporation (EFC)

Clean Water State Revolving Fund (CWSRF) Program

The Clean Water State Revolving Fund (CWSRF) is jointly administered by the EPA. The CWSRF provides low-interest rate financing to municipalities to construct water quality protection projects such as sewers and wastewater treatment facilities. Municipalities include any county, city, town, village, district corporation, county or town improvement district, Indian reservation wholly within New York State, any public benefit corporation or public authority established pursuant to the laws of New York, or any agency of New York State which is empowered to construct and operate a project, or any two or more of the foregoing which are acting jointly in connection with a project. Municipalities and not-for-profit organizations are eligible applicants for qualified land acquisition projects.

Program information can be found at: https://www.epa.gov/cwsrf

Green Innovation Grant Program (GIGP)

The Green Innovation Grant Program supports projects across New York State that utilize unique stormwater infrastructure design and create cutting-edge green technologies. GIGP provides funding for highly visible projects which: 1) Protect and improve water quality; 2) Spur innovation in stormwater management; 3) Build capacity locally and beyond by inspiring others to build and maintain green infrastructure; 4) Facilitate the transfer of new technologies and practices to other areas of the State.

Program information can be found at: https://www.efc.ny.gov/GIGP

Clean Vessel Assistance Program (CVAP)

The Clean Vessel Assistance Program is a U.S. Fish and Wildlife Service funded program, administered by NYS EFC that provides grants to marinas for the installation, renovation, and replacement of pumpout stations for the removal and disposal of recreational boater septic waste. The CVAP provides up to 75% of eligible project costs up to $60,000 to marinas, municipalities and not-for-profit organizations for installing pumpout boats and up to $35,000 for installing or upgrading stationary pumpout units or upgrading pumpout boats. Additional CVAP grants are also available for the operation and maintenance of pumpout facilities, as well as educational projects that address the benefits, use and availability of pumpout stations.

Program information can be found at: https://www.efc.ny.gov/CVAP

NYS Water Infrastructure Improvement Act

The New York State Water Infrastructure Improvement Act invests in clean and drinking water infrastructure projects and water quality projection across New York State. These grants are available for sewage treatment works.

Eligible applicants: Municipalities including any county, city, town, village, district corporation, county or town improvement district, school district, Indian nation or tribe recognized by the State or the United States with a reservation wholly or partly within the boundaries of New York State, any public benefit corporation or public authority established pursuant to the laws of New York or any agency of the State that is empowered to construct and operate a water quality infrastructure project. School districts are eligible for a Water Infrastructure Improvement Act grant but are ineligible for CWSRF financial assistance.

Program information can be found at: https://www.efc.ny.gov/WIIA

NYS Intermunicipal Water Infrastructure Grants Program

The Intermunicipal Water Infrastructure Grants Program assists municipalities in supporting intermunicipal water quality infrastructure projects by helping to fund both drinking water and sewage treatment works projects that serve multiple municipalities. Eligible applicants: Municipalities, including any county, city, town, village, district corporation, county or town improvement district, school district, Indian nation or tribe recognized by the state or the United States with a reservation wholly or partly within the boundaries of New York State, any public benefit corporation or public authority established pursuant to the laws of New York or any agency of the State that is empowered to construct and operate a water quality infrastructure project. A school district is eligible to apply for an Intermunicipal Water Infrastructure grant and Drinking Water State Revolving Fund financing assistance but is ineligible for CWSRF financial assistance.

Program information can be found at: https://www.efc.ny.gov/IMG

Integrated Solutions Construction Grant Program

The Integrated Solutions Construction Grant Program funds projects that incorporate green infrastructure into CWSRF projects. Successful applicants will construct projects that remove stormwater from combined, sanitary or storm sewers. The projects should demonstrate the value of integrating green practices into traditional gray infrastructure to provide water quality benefits.

Eligible applicants: Municipalities, including any county, city, town, village, district corporation, county or town improvement district, Indian reservation wholly within New York State, any public benefit corporation or public authority established pursuant to the laws of New York or any agency of New York State which is empowered to construct and operate a project, or any two or more of the foregoing which are acting jointly in connection with a project. In accordance with the laws, rules and regulations governing the CWSRF, projects defined in the federal Clean Water Act, Section 212 as treatment works must be publicly owned. (Income restrictions apply).

Program information can be found at: https://www.efc.ny.gov/ISC

Empire State Development (ESD)

Empire State Development Grant Funds

ESD grant funds help drive regional and local economic development across New York State in cooperation with ten Regional Economic Development Councils ("Regional Councils"). Grant funds may be used to finance infrastructure investments in order to attract new businesses and expand existing businesses, thereby fostering further investment. Infrastructure investments are capital expenditures for infrastructure including transportation, parking garages, water and sewer, communication, and energy generation and distribution. Infrastructure investment projects may also include planning or feasibility studies relating to a specific capital project or site.

Eligible applicants include: For-profit businesses, not-for-profit corporations, business improvement districts, local development corporations, public benefit corporations (including industrial development agencies), economic development organizations, research and academic institutions, incubators, technology parks, municipalities, counties, regional planning councils, tourist attractions and community facilities.

Program information can be found at: http://regionalcouncils.ny.gov/

Market New York

Market New York is a grant program established to strengthen tourism and attract visitors to New York State by promoting destinations, attractions and special events.

Funding is available for eligible projects that will create an economic impact by increasing tourism throughout the state. Grant funding will be allocated among the ten (10) REDC regions, based on each REDC's five-year strategic plan that sets out a comprehensive vision for economic development and specific strategies to implement that vision. Program information can be found at: http://regionalcouncils.ny.gov/

Office of Parks, Recreation and Historic Preservation (OPRHP)

Environmental Protection Fund (EPF) Grants Program for Parks, Preservation and Heritage

EPF Parks, Preservation and Heritage grant funding is available for the acquisition, planning, development, and improvement of parks, historic properties, and heritage areas located within the physical boundaries of the State of New York.

Eligible applicants include municipalities, state agencies, public benefit corporations, public authorities, and not-for-profit corporations.

Program information can be found at: https://parks.ny.gov/grants/

Recreational Trails Program (RTP)

The Recreational Trails Program is a program of the New York State Department of Transportation (NYSDOT) administered by the Office of Parks, Recreation and Historic Preservation (OPRHP). The Recreational Trails Program provides funds to states to develop and maintain recreational trails for both motorized and non-motorized recreational trail use. Funding is available for the maintenance and restoration of existing recreational trails, development and rehabilitation of trailside and trailhead facilities and trail linkages for recreational trails, purchase and lease of recreational trail construction and maintenance equipment, construction of new recreational trails, acquisition of easements and fee simple title to property for recreational trails or recreational trail corridors, and assessment of trail conditions for accessibility and maintenance.

Eligible applicants include municipalities, state agencies, federal agencies, other government entities, and not-for-profit corporations.

Program information can be found at: http://www.fhwa.dot.gov/environment/recreational_trails/

New York State Council on the Arts

Arts and Culture Initiatives

Funding for arts and culture initiatives is available for projects designed to enhance and transform the cultural and economic vitality of New York State communities. Eligible applicants include nonprofit organizations either incorporated in or registered to do business in New York State, tribes and local governments.

Program information can be found at: http://regionalcouncils.ny.gov/

New York State Department of Agriculture and Markets (NYSDAM)

Agricultural Environmental Management (AEM)

AEM is a voluntary, incentive-based program that helps farmers make common-sense, cost-effective and science-based decisions to help meet business objectives while protecting and conserving the State's natural resources. Farmers work with local AEM resource professionals to develop comprehensive farm plans using a tiered process. The primary goal of AEM is to

protect and enhance the environment while maintaining the viability of agriculture in New York State.

Program information can be found at: https://agriculture.ny.gov/soil-and-water/agricultural-environmental-management

Agricultural Nonpoint Source Abatement and Control Program:

The Agricultural Nonpoint Source Abatement and Control Program assists farmers in preventing water pollution from agricultural activities by providing technical assistance and financial incentives. County Soil & Water Conservation Districts apply for the competitive grants on behalf of farmers and coordinate funded conservation projects.

Program information can be found at: https://agriculture.ny.gov/soil-and-water/agricultural-non-point-source-abatement-and-control

Local Funding Opportunities

Suffolk County

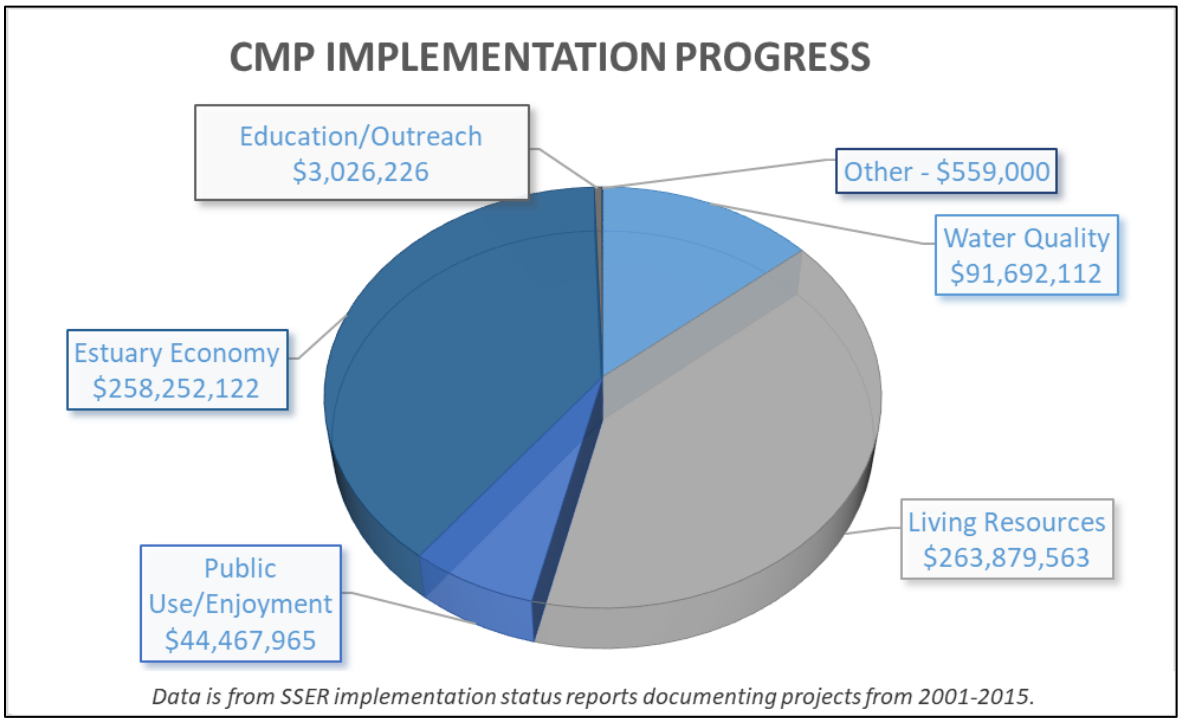
Suffolk County Septic Improvement Program

Grant funding, of up to $30,000, will be provided toward the purchase and installation of Suffolk County Department of Health Services approved Innovative and Alternative nitrogen removal onsite wastewater treatment system (I/A OWTS) and leaching structure, as well as toward attendant engineering and design services. In addition to the grant, homeowners can qualify to finance the remaining cost of the systems over 15 years at a low 3% fixed interest rate. All other costs, including, but not limited to, costs above the authorized grant amount, irrigation repairs, electrical improvements unrelated to system installation or other improvements necessary for the installation are the responsibility of the property owner/applicant, including post-installation landscaping restoration.

The Septic Improvement Program is available to qualified owners of residential property located within Suffolk County.

Program information can be found at: http://www.reclaimourwater.info/

Appendix 2:
Long Island South Shore Estuary Reserve Comprehensive Management Plan Implementation Funding 2001 - 2015



CMP Category	Total Funding	Total Projects
Water Quality	$91,692,112	178
Living Resources	$263,879,563	105
Public Use/Enjoyment	$44,467,965	70
Estuary Economy	$258,252,122	74
Education/Outreach	$3,026,226	33
Other	$559,000	3
	$661,113,462	**463**

Project Name	Project Lead	CMP Chapter	Project Cost	County	Town/Village
Quantifying the Loading of Nitrogen in the Eastern Bays	NYS DOS and Stony Brook University	1 - Improve and Maintain Water Quality	$203,368	Suffolk	Southampton
Western Bays Total Maximum Daily Load	NYS DOS and Stony Brook University	1 - Improve and Maintain Water Quality	$596,902	Nassau	Hempstead
Coordinated Water Resources Monitoring Strategy	NYS DOS and USGS	1 - Improve and Maintain Water Quality	$210,000	Nassau/Suffolk	All
Heisser Lane Drainage Improvements	Nassau County	1 - Improve and Maintain Water Quality	$500,000	Nassau	Oyster Bay
Catch Basin Insert Program	Nassau County	1 - Improve and Maintain Water Quality	$1,550,000	Nassau	All
Nitrogen Fertilizer Reduction Initiative	Suffolk County	1 - Improve and Maintain Water Quality	$196,575	Suffolk	All
Reclaiming our water, Coastal Resiliency	Suffolk County	1 - Improve and Maintain Water Quality	$4,000,000	Suffolk	All
Highway Yard Drainage Improvements	Suffolk County	1 - Improve and Maintain Water Quality	$200,000	Suffolk	Babylon

Stormwater Remediation on Weesuck Creek	Suffolk County	1 - Improve and Maintain Water Quality	$25,000	Suffolk	Southampton
Water Treatment Plant Repairs	City of Long Beach	1 - Improve and Maintain Water Quality	$2,850,000	Nassau	Long Beach
Drainage Improvements	City of Long Beach	1 - Improve and Maintain Water Quality	$8,350,000	Nassau	Long Beach
Water Quality Sampling for Detection of Illicit Discharges	Town of Hempstead	1 - Improve and Maintain Water Quality	$246,070	Nassau	Hempstead
Historic Water Quality Data Analysis	Town of Hempstead	1 - Improve and Maintain Water Quality	$13,430	Nassau	Hempstead
Deployment of Continuous Water Quality Sampling Devices	Town of Hempstead	1 - Improve and Maintain Water Quality	$258,710	Nassau	Hempstead
Tide Gauge Upgrade and Data Distribution Program	Town of Hempstead	1 - Improve and Maintain Water Quality	$94,150	Nassau	Hempstead
Hempstead Bay Hydrographic Survey Boat	Town of Hempstead	1 - Improve and Maintain Water Quality	$71,533	Nassau	Hempstead

Vertical Profiling of Hempstead Bay Water Column	Town of Hempstead	1 - Improve and Maintain Water Quality	$11,310	Nassau	Hempstead
Installation of Storm Drain Filtration Systems	Town of Oyster Bay	1 - Improve and Maintain Water Quality	$100,000	Nassau	Oyster Bay
Nonpoint Source Pollution Control Practices Implementation	Town of Oyster Bay	1 - Improve and Maintain Water Quality	$42,000	Nassau	Oyster Bay
Wyandanch Remediation	Town of Babylon	1 - Improve and Maintain Water Quality	$225,000	Suffolk	Babylon
Wyandanch Sewer Project	Town of Babylon	1 - Improve and Maintain Water Quality	$16,668,482	Suffolk	Babylon
Wyandanch Rising - Geiger Lake Park	Town of Babylon	1 - Improve and Maintain Water Quality	$900,000	Suffolk	Babylon
Highway Yard Drainage Improvements	Town of Babylon	1 - Improve and Maintain Water Quality	$200,000	Suffolk	Babylon
Digitization of Drainage Infrastructure	Town of Babylon	1 - Improve and Maintain Water Quality	$60,000	Suffolk	Islip

Great Cove Watershed Management Plan	Town of Islip	1 - Improve and Maintain Water Quality	$100,000	Suffolk	Islip
Connetquot Creek Stormwater Project Phase 2 BMPs	Town of Islip	1 - Improve and Maintain Water Quality	$1,200,000	Suffolk	Islip
Greens Creek and Brown's River Watershed Management Plan Implementation	Town of Islip	1 - Improve and Maintain Water Quality	$200,000	Suffolk	Islip
Tariff Street Stormwater Mitigation	Town of Islip	1 - Improve and Maintain Water Quality	$180,000	Suffolk	Islip
Browns River Pump-out Station	Town of Islip	1 - Improve and Maintain Water Quality	$18,881	Suffolk	Brookhaven
Forge River TMDL	Town of Brookhaven	1 - Improve and Maintain Water Quality	$200,000	Suffolk	Brookhaven
Carmans River Conservation and Management Plan	Town of Brookhaven	1 - Improve and Maintain Water Quality	$75,000	Suffolk	Brookhaven
Tuthills Creek Watershed Management Plan	Town of Brookhaven and Village of Patchogue	1 - Improve and Maintain Water Quality	$150,000	Suffolk	Patchogue

Forge River Watershed Management Plan	Town of Brookhaven	1 - Improve and Maintain Water Quality	$476,000	Suffolk	Brookhaven
Improvement and Maintenance of Vessel Pump-out Facilities	Town of Southampton	1 - Improve and Maintain Water Quality	$40,000	Suffolk	Southampton
Amendment of Local Codes: Plastic Bag Ban	Town of Southampton	1 - Improve and Maintain Water Quality	$0	Suffolk	Southampton
Development of Water Protection Plan/Watershed Management Plan	Town of Southampton	1 - Improve and Maintain Water Quality	$200,000	Suffolk	Southampton
On-site Wastewater Treatment Upgrade Program	Town of Southampton	1 - Improve and Maintain Water Quality	$150,000	Suffolk	Southampton
Implementation of the Stormwater Phase II Program	Town of Southampton	1 - Improve and Maintain Water Quality	$200,000	Suffolk	Southampton
Planning for Sewer District Expansion	Village of Patchogue	1 - Improve and Maintain Water Quality	$50,000	Suffolk	Patchogue
Streamflow and Groundwater Level Monitoring Program	NYS DEC	1 - Improve and Maintain Water Quality	$88,300	Nassau/Suffolk	All

USGS Monitoring Station at Hog Island Channel	NYS DEC	1 - Improve and Maintain Water Quality	$368,000	Nassau	Hempstead
Breach Monitoring and GSB Observatory	NYS DEC and Stony Brook University	1 - Improve and Maintain Water Quality	$130,000	Suffolk	All
Assessing the Response of Indicator Bacteria in GSB to Hurricane Sandy	FINS and Stony Brook University	1 - Improve and Maintain Water Quality	$50,000	Suffolk	Brookhaven
Impacts of Super-storm Sandy: Mapping & Quantification of Geomorphological Change	FINS and Rutgers University	1 - Improve and Maintain Water Quality	$253,310	Suffolk	Brookhaven
Breach Migration and Dimensions	FINS-NPS	1 - Improve and Maintain Water Quality	$10,000	Suffolk	Brookhaven
Breach and Dune Geo-morphology and Modeling	FINS and USGS St. Petersburg Coastal and Marine Center	1 - Improve and Maintain Water Quality	$1,900,000	Suffolk	Brookhaven
Physical Monitoring of the Old Inlet Breach at FINS and GSB Physical Response 2012-2016	FINS and Stony Brook University	1 - Improve and Maintain Water Quality	$254,968	Suffolk	Brookhaven
Tide Gauge Installation, Operation, and Maintenance	FINS, NPS, and USGS-NY Water Science Center	1 - Improve and Maintain Water Quality	$84,165	Suffolk	Brookhaven

Monitoring Water Quality and Seagrass	FINS and Stony Brook University	1 - Improve and Maintain Water Quality	$348,939	Suffolk	Brookhaven
Improvement and Maintenance of Vessel Pump-out Facilities	Town of Hempstead	1 - Improve and Maintain Water Quality	$183,992	Nassau	Hempstead
Implementation of the Nassau County Stormwater Management Program (segment 1)	Nassau (C)	1 - Improve and Maintain Water Quality	$600,000	Nassau	All
Purchase of two vacuum eductor trucks	Nassau (C)	1 - Improve and Maintain Water Quality	$700,000	Nassau	All
Nassau County Water Quality Coordinating Committee Annual Reports	Nassau (C) SWCD	1 - Improve and Maintain Water Quality	$4,500	Nassau	All
Nassau County SWCD Outreach	Nassau (C) SWCD	1 - Improve and Maintain Water Quality	$100,000	Nassau	All
Tide Gauge Upgrade and Data Distribution Program	Hempstead (T)	1 - Improve and Maintain Water Quality	$94,150	Nassau	Hempstead
Deployment of Continuous Water Quality Sampling Devices	Hempstead (T)	1 - Improve and Maintain Water Quality	$258,710	Nassau	Hempstead

Water Quality Sampling for Detection of Illicit Discharges	Hempstead (T)	1 - Improve and Maintain Water Quality	$246,050	Nassau	Hempstead
Historic Water Quality Data Analysis	Hempstead (T)	1 - Improve and Maintain Water Quality	$13,430	Nassau	Hempstead
MS4 System Management, Implementation of Phase II Best Management Practices	East Rockaway (V)	1 - Improve and Maintain Water Quality	$130,000	Nassau	East Rockaway
Milburn Pond Floatables Collection System	Nassau (C)	1 - Improve and Maintain Water Quality	$177,000	Nassau	Freeport Village
Street Sweeper and Catch Basin Eductor Vehicle	Freeport (V)	1 - Improve and Maintain Water Quality	$220,000	Nassau	Freeport Village
Jones Beach Sewage Treatment Plant Outfall Pipeline Diversion to Cedar Creek	NYSOPRHP	1 - Improve and Maintain Water Quality	$2,000,000	Nassau	Hempstead
Jones Beach Sewage Treatment Plant Upgrades	NYSOPRHP	1 - Improve and Maintain Water Quality	$268,000	Nassau	Hempstead

Jones Beach State Park Water Treatment Plant Upgrades	NYSOPRHP	1 - Improve and Maintain Water Quality	$250,000	Nassau	Hempstead
Structural Rehabilitation of the Jones Beach State Park Water Tower	NYSOPRHP	1 - Improve and Maintain Water Quality	$6,200,000	Nassau	Hempstead
Digitization of Babylon Drainage Infrastructure	Babylon (T)	1 - Improve and Maintain Water Quality	$60,000	Suffolk	Babylon
Carlls River Watershed Environmental Clean-up	Babylon (T)	1 - Improve and Maintain Water Quality	$350,000	Suffolk	Babylon
Purchase of Street Sweeper to Implement Stormwater Management Program	Babylon (V)	1 - Improve and Maintain Water Quality	$250,000	Suffolk	Babylon
Purchase of Drain Cleaning Equipment to Implement Stormwater Management Program	Babylon (V)	1 - Improve and Maintain Water Quality	$80,000	Suffolk	Babylon
Stormwater Infrastructure Mapping with Pollutant Mitigation Assessment	Brightwaters (V)	1 - Improve and Maintain Water Quality	$30,000	Suffolk	Islip
Implementation of Required Stormwater Laws	Islandia (V)	1 - Improve and Maintain Water Quality	$18,000	Suffolk	Islip

Implementation of Green's Creek and Brown's River Watershed Management Plan	Islip (T)	1 - Improve and Maintain Water Quality	$200,000	Suffolk	Islip
Tariff Street Stormwater Mitigation	Islip (T)	1 - Improve and Maintain Water Quality	$180,000	Suffolk	Islip
Wastewater Treatment Plant Reconstruction and Expansion	Patchogue (V)	1 - Improve and Maintain Water Quality	$674,118	Suffolk	Brookhaven
Former Bellport Gas Station Remediation	Suffolk (C)	1 - Improve and Maintain Water Quality	$130,426	Suffolk	Brookhaven
Illicit Discharge Reporting and Response Program	Brookhaven (T)	1 - Improve and Maintain Water Quality	$36,000	Suffolk	All
Tuthills Creek Watershed Management Plan	Brookhaven (T)	1 - Improve and Maintain Water Quality	$150,000	Suffolk	Brookhaven
Swan River Watershed Management Plan Implementation	Brookhaven (T)	1 - Improve and Maintain Water Quality	$345,000	Suffolk	Brookhaven
Pine Neck Boat Ramp Drainage Implementation	Brookhaven (T)	1 - Improve and Maintain Water Quality	$190,900	Suffolk	Brookhaven

Beaver Dam Creek Watershed Management Plan	NYS DOS	1 - Improve and Maintain Water Quality	$14,771	Suffolk	Brookhaven
Stormwater Remediation to Narrow Bay at County Rd. 46, William Floyd Parkway (segment 1)	Suffolk (C)	1 - Improve and Maintain Water Quality	$550,000	Suffolk	Brookhaven
Upgrade Wastewater Treatment System in the Lower Forge River Watershed	Suffolk (C) SWCD	1 - Improve and Maintain Water Quality	$199,095	Suffolk	Brookhaven
Forge River Watershed Management Plan	Brookhaven (T)	1 - Improve and Maintain Water Quality	$476,000	Suffolk	Brookhaven
Forge River Total Maximum Daily Loads	Brookhaven (T)	1 - Improve and Maintain Water Quality	$200,000	Suffolk	Brookhaven
Pumpout Facilities Maintained, Ongoing	National Park Service, U.S. Department of the Interior, Fire Island National Seashore (FINS)	1 - Improve and Maintain Water Quality	$0	Suffolk	Brookhaven
Groundwater-Submarine Aquifer Relationship Study, Ongoing	National Park Service, U.S. Department of the Interior, Fire Island National Seashore (FINS)	1 - Improve and Maintain Water Quality	$0	Suffolk	All

Forge River Watershed Ecosystem Restoration and Flood Damage Reduction Reconnaissance Study and Feasibility Study	USACE	1 - Improve and Maintain Water Quality	$3,100,000	Suffolk	Brookhaven
Phase II Stormwater Regulations for Municipal Separate Storm Sewer System (MS4) Permits	USEPA	1 - Improve and Maintain Water Quality	$0	Nassau/Suffolk	All
SSER Declared a Vessel No Discharge Zone (NDZ)	USEPA	1 - Improve and Maintain Water Quality	$0	Nassau/Suffolk	All
Watershed Planning Multi-Media Materials (Guidebook, DVD, Web Pages), 2009	NYS DOS & NYS DEC	1 - Improve and Maintain Water Quality	$0	Nassau/Suffolk	All
Long Island-wide MS4 Stormwater Phase II Planning	NYS DEC	1 - Improve and Maintain Water Quality	$232,893	Nassau/Suffolk	All
Clean Vessel Assistance Program (CVAP), Ongoing	NYS EFC	1 - Improve and Maintain Water Quality	$0	Nassau/Suffolk	All
Pumpout Stations Maintained for the Removal and Disposal of Recreational Boater Septic Waste, Ongoing	OPRHP	1 - Improve and Maintain Water Quality	$0	Nassau/Suffolk	All

Canada Goose Population Reduced, Ongoing	OPRHP	1 - Improve and Maintain Water Quality	$0	Nassau/Suffolk	All
South Shore Estuary Stormwater Control	Nassau (C)	1 - Improve and Maintain Water Quality	$150,000	Nassau	All
Catch Basin Inserts	Nassau (C)	1 - Improve and Maintain Water Quality	$1,650,000	Nassau	All
Capture Nets to Reduce Floatable Debris	Nassau (C)	1 - Improve and Maintain Water Quality	$65,000	Nassau	All
Urban Forest Master Plan	Nassau (C)	1 - Improve and Maintain Water Quality	$130,000	Nassau	All
Bannister Creek Stormwater Project	Nassau (C)	1 - Improve and Maintain Water Quality	$388,000	Nassau	All
Rehabilitation of the Viceroy Section Adjacent to the Massapequa Preserve	Nassau (C)	1 - Improve and Maintain Water Quality	$85,000	Nassau	Oyster Bay
Massapequa Creek Stormwater Treatment	Nassau (C)	1 - Improve and Maintain Water Quality	$75,000	Nassau	Oyster Bay

Massapequa Creek Sediment Removal	Nassau (C)	1 - Improve and Maintain Water Quality	$250,000	Nassau	Oyster Bay
Coes Neck Park Remediation	Nassau (C)	1 - Improve and Maintain Water Quality	$650,000	Nassau	Hempstead
Stormwater Drainage Improvement at Washington Avenue Park	Nassau (C)	1 - Improve and Maintain Water Quality	$35,000	Nassau	Hempstead
Merokee Pond Dredging	Nassau (C)	1 - Improve and Maintain Water Quality	$1,850,000	Nassau	Hempstead
Stormwater Runoff Impact Analysis Procedures Manual/Subwatershed Reports	Nassau (C)	1 - Improve and Maintain Water Quality	$0	Nassau	All
Local Law Adopted	Nassau (C)	1 - Improve and Maintain Water Quality	$0	Nassau	All
New Drainage Requirements Adopted	Nassau (C)	1 - Improve and Maintain Water Quality	$0	Nassau	All
Massapequa Preserve Streamflow Augmentation and Pond Restoration Project	Nassau (C)	1 - Improve and Maintain Water Quality	$8,500,000	Nassau	Oyster Bay

Canada Geese Eradication Program, Ongoing	Nassau (C)	1 - Improve and Maintain Water Quality	$0	Nassau	All
Water Storm Basin Debris Control	Hempstead (T)	1 - Improve and Maintain Water Quality	$300,000	Nassau	Hempstead
Lofts Pond Debris Control	Hempstead (T)	1 - Improve and Maintain Water Quality	$5,000	Nassau	Hempstead
Pumpout Vessels for Removal and Disposal of Recreational Boater Septic Waste	Hempstead (T)	1 - Improve and Maintain Water Quality	$175,000	Nassau	Hempstead
Replacement of Wood Bulkheads	Long Beach (City)	1 - Improve and Maintain Water Quality	$1,558,000	Nassau	City of Long Beach
Willow Pond Dredging Project	Hewlett Harbor (V):	1 - Improve and Maintain Water Quality	$350,000	Nassau	Hempstead
Milburn Pond Debris Control	Freeport (V)	1 - Improve and Maintain Water Quality	$12,000	Nassau	Freeport Village
Mill Basin Debris Dock Trap	Freeport (V)	1 - Improve and Maintain Water Quality	$54,000	Nassau	Freeport Village

Purchase of Debris Collection Vessels	Freeport (V)	1 - Improve and Maintain Water Quality	$70,000	Nassau	Freeport Village
Purchase of Vacuum Truck	Freeport (V)	1 - Improve and Maintain Water Quality	$86,000	Nassau	Freeport Village
Local Law Adopted	Oyster Bay (T)	1 - Improve and Maintain Water Quality	$0	Nassau	Oyster Bay
Swirl Separators – Stormwater Treatment Controls	Island Park (V)	1 - Improve and Maintain Water Quality	$472,000	Nassau	Island Park Village
Catch Basin Inserts	Massapequa Park (V)	1 - Improve and Maintain Water Quality	$518,000	Nassau	Massapequa Park Village
Watershed Boundary Delineations	Suffolk (C)	1 - Improve and Maintain Water Quality	$0	Suffolk	Brookhaven
Removal and Disposal of Obsolete Underground Petroleum Storage Tanks	Suffolk (C)	1 - Improve and Maintain Water Quality	$111,000	Suffolk	All
Standard Operating Procedures for Fuel and Chemical Tanks	Suffolk (C)	1 - Improve and Maintain Water Quality	$70,000	Suffolk	All

Stormwater Remediation, Yaphank Lakes and Carmans River	Suffolk (C)	1 - Improve and Maintain Water Quality	$200,000	Suffolk	Brookhaven
Local Law Adopted	Suffolk (C)	1 - Improve and Maintain Water Quality	$0	Suffolk	All
Salt Storage Upgrade	Babylon (T)	1 - Improve and Maintain Water Quality	$30,000	Suffolk	Babylon
Local Law Adopted	Babylon (T)	1 - Improve and Maintain Water Quality	$0	Suffolk	Babylon
Green Homes Septic Assistance Program	Babylon (T)	1 - Improve and Maintain Water Quality	$0	Suffolk	Babylon
Drainage Infrastructure Improvements	Babylon (T)	1 - Improve and Maintain Water Quality	$1,000,000	Suffolk	Babylon
Low Impact Development/Green Infrastructure Improvements at Phelps Lane and Tanner Parks	Babylon (T)	1 - Improve and Maintain Water Quality	$225,000	Suffolk	Babylon
Pooper Scooper Program	Babylon (T)	1 - Improve and Maintain Water Quality	$0	Suffolk	Babylon

Public Educated	Babylon (T)	1 - Improve and Maintain Water Quality	$0	Suffolk	Babylon
Streets Swept	Babylon (T)	1 - Improve and Maintain Water Quality	$0	Suffolk	Babylon
Stormwater Infrastructure Cleaning	Babylon (T)	1 - Improve and Maintain Water Quality	$0	Suffolk	Babylon
Canada Goose Population Reduced	Babylon (T)	1 - Improve and Maintain Water Quality	$0	Suffolk	Babylon
Pumpout Stations Maintained for the Removal and Disposal of Recreational Boater Septic Waste	Babylon (T)	1 - Improve and Maintain Water Quality	$4,000	Suffolk	Babylon
Protection of Babylon Village Waterways	Babylon (V)	1 - Improve and Maintain Water Quality	$620,000	Suffolk	Babylon Village
Pumpout Vessel for Removal and Disposal of Recreational Boater Septic Waste	Islip (T)	1 - Improve and Maintain Water Quality	$0	Suffolk	Islip
Champlin Creek Stormwater Mitigation	Islip (T)	1 - Improve and Maintain Water Quality	$20,000	Suffolk	Islip

Street Sweeping	Islip (T)	1 - Improve and Maintain Water Quality	$0	Suffolk	Islip
Storm Drain/Catch Basin Maintenance	Islip (T)	1 - Improve and Maintain Water Quality	$0	Suffolk	Islip
Local Law Adopted	Brookhaven (T)	1 - Improve and Maintain Water Quality	$0	Suffolk	Brookhaven
Pumpout Vessels for Removal and Disposal of Recreational Boater Septic Waste	Brookhaven (T)	1 - Improve and Maintain Water Quality	$151,410	Suffolk	Brookhaven
Pumpout Vessel for Removal and Disposal of Recreational Boater Septic Waste	Southampton (T)	1 - Improve and Maintain Water Quality	$154,400	Suffolk	Southampton
Installation of Waterfowl Feeding Signage	Cornell Cooperative Extension of Suffolk County	1 - Improve and Maintain Water Quality	$0	Suffolk	All
Undergraduate Research Project: Multi-year Trend Analysis, 2005-2009, of the Water Quality Monitoring Program for the Great South Bay and Adjacent Waters, Fire Island National Seashore	Dowling College	1 - Improve and Maintain Water Quality	$75,000	Suffolk	All

Temporal and Spatial Variations in Water Quality on New York South Shore Estuary Tributaries: Carmans, Patchogue, and Swan Rivers	Dowling College	1 - Improve and Maintain Water Quality	$0	Suffolk	All
Barnum Isle Stormwater Improvements	Town of Hempstead	1 - Improve and Maintain Water Quality	$ 135,600.00	Nassau	Hempstead
East Bay Watershed Nonpoint Source Mitigation Project	Nassau County	1 - Improve and Maintain Water Quality	$ 127,500.00	Nassau	
Equipment to Maintain Catch Basins in the South Shore Estuary	Nassau County	1 - Improve and Maintain Water Quality	$ 148,949.00	Nassau	All
Great Cove Tributary NPS Mitigation Project	Town of Islip	1 - Improve and Maintain Water Quality	$ 125,000.00	Suffolk	Islip
Implementation of Nonpoint Source Pollution Control Measures	Town of Oyster Bay	1 - Improve and Maintain Water Quality	$ 21,500.00	Nassau	Oyster Bay
Nonpoint Source Pollution Mitigation	Nassau County	1 - Improve and Maintain Water Quality	$ 782,224.00	Nassau	All
Ocean Avenue, Blue Point Stormwater Improvements	Town of Brookhaven	1 - Improve and Maintain Water Quality	$ 100,000.00	Suffolk	Brookhaven

SW Abatement Activities, South Shore Estuary: Segment 1	Town of Southampton	1 - Improve and Maintain Water Quality	$ 260,000.00	Suffolk	Southampton
Stowe Avenue and Tappan Avenue Drainage Improvements	Village of Babylon	1 - Improve and Maintain Water Quality	$ 504,088.00	Suffolk	Babylon
Nonpoint Source Pollution Mitigation	Village of Freeport	1 - Improve and Maintain Water Quality	$ 50,000.00	Nassau	Freeport
Storm Outfall Upgrades	Village of Island Park	1 - Improve and Maintain Water Quality	$ 153,000.00	Nassau	Island Park
Planning for Sewer District Expansion	Village of Patchogue	1 - Improve and Maintain Water Quality	$ 25,000.00	Suffolk	Patchogue
Stormwater Remediation on County Road 50	Suffolk County	1 - Improve and Maintain Water Quality	$ 67,500.00	Suffolk	
Stormwater Retrofit Demonstration Project, Bay Park Sewage Treatment Plant	Nassau County	1 - Improve and Maintain Water Quality	$ 300,000.00	Nassau	Hempstead
Wastewater Treatment Improvements	Village of Lawrence	1 - Improve and Maintain Water Quality	$ 1,164,496	Nassau	Lawrence

Wastewater Treatment Improvements	Village of Patchogue	1 - Improve and Maintain Water Quality	$ 1,164,496	Suffolk	Patchogue
Beaver Dam Creek Farm Agricultural Nonpoint Source Project	Suffolk County Soil & Water Conservation District	1 - Improve and Maintain Water Quality	$ 30,222.00	Suffolk	
Browns Creek and Green Creek Watershed Management Plans	Town of Islip	1 - Improve and Maintain Water Quality	$ 85,214.00	Suffolk	Islip
Connequot Creek Stormwater Project - Phase II	Town of Islip	1 - Improve and Maintain Water Quality	$ 1,375,000	Suffolk	Islip
Continuous Deflection Separation Installation at Woodmere Country Club	Nassau County	1 - Improve and Maintain Water Quality	$ 150,000.00	Nassau	
Fletchman Farm Runoff Management.	Suffolk County Soil & Water Conservation District	1 - Improve and Maintain Water Quality	$ 78,052.00	Suffolk	
GIS Map and Database of Town Storm Drains	Town of Hempstead	1 - Improve and Maintain Water Quality	$ 64,000.00	Nassau	Hempstead
Installation of Leaching Basins	Village of Lindenhurst	1 - Improve and Maintain Water Quality	$ 210,000.00	Nassau	Lindenhurst

Johnson Avenue Drainage Improvements - Stormwater Mitigation	Village of Islandia	1 - Improve and Maintain Water Quality	$ 151,000.00	Suffolk	Islandia
Orchard Neck Creek, Center Moriches Stormwater Mitigation	Town of Brookhaven	1 - Improve and Maintain Water Quality	$ 132,000.00	Suffolk	Brookhaven
Preparation of Watershed Action Plans for Great Cove Tributaries	Town of Islip	1 - Improve and Maintain Water Quality	$ 130,539.00	Suffolk	Islip
Quantuck Bay and Mecox Bay Watershed Action Plans	Town of Southampton	1 - Improve and Maintain Water Quality	$ 120,000.00	Suffolk	Southampton
Stormwater Abatement Activities	Suffolk County	1 - Improve and Maintain Water Quality	$ 664,794.00	Suffolk	All
Swan River Watershed Action Plan	Town of Brookhaven	1 - Improve and Maintain Water Quality	$ 70,000.00	Suffolk	Brookhaven
Massapequa Preserve Improvement Project	Nassau County	2 - Protect and Restore Living Resources	$10,002,000	Nassau	Massapequa Park
Mud Creek Watershed Aquatic Ecosystem Restoration Planning	Suffolk County	2 - Protect and Restore Living Resources	$569,395	Suffolk	Patchogue

Lower Yaphank Lake Fish Ladder on Carmans River	Suffolk County	2 - Protect and Restore Living Resources	$504,000	Suffolk	Brookhaven
Integrated Salt Marsh Management	Suffolk County	2 - Protect and Restore Living Resources	$1,998,849	Suffolk	Brookhaven
Salt March Erosion Trend Analysis	Town of Hempstead	2 - Protect and Restore Living Resources	$30,000	Nassau	Hempstead
Hard Clam Stock Quality Assessment	Town of Hempstead	2 - Protect and Restore Living Resources	$51,050	Nassau	Hempstead
Oyster Reef Project	Town of Hempstead	2 - Protect and Restore Living Resources	$116,406	Nassau	Hempstead
Hempstead Bay Hard Clam Condition Monitoring	Town of Hempstead	2 - Protect and Restore Living Resources	$10,000	Nassau	Hempstead
Tidal Marsh Sparrow Nesting Presence/Survival in an Urban Environment	Town of Hempstead	2 - Protect and Restore Living Resources	$0	Nassau	Hempstead
Participation in NYSERDA report: Mercury Assessment of Saltmarsh Sparrows on LI	Town of Hempstead	2 - Protect and Restore Living Resources	$0	Nassau	Hempstead

Hempstead Bay Shellfish Restoration Program	Town of Hempstead	2 - Protect and Restore Living Resources	$152,140	Nassau	Hempstead
Daily Bird Population County and Weather Monitoring	Town of Hempstead	2 - Protect and Restore Living Resources	$0	Nassau	Hempstead
Participation in "Factors Impacting Tidal Marsh Sparrow Nesting Presence and Nest Survival in an Urban Environment of NYC"	Town of Hempstead	2 - Protect and Restore Living Resources	$0	Nassau	Hempstead
Fall Hawk Migration Observations	Town of Hempstead	2 - Protect and Restore Living Resources	$0	Nassau	Hempstead
Participation in NYS Winter Waterfowl County Oceanside-Freeport	Town of Hempstead	2 - Protect and Restore Living Resources	$0	Nassau	Hempstead
Wildlife Management	Town of Hempstead	2 - Protect and Restore Living Resources	$0	Nassau	Hempstead
South Oyster Bay Hard Clam Population Survey	Town of Oyster Bay	2 - Protect and Restore Living Resources	$100,000	Nassau	Oyster Bay
Carman's River Fish Passage	Town of Brookhaven	2 - Protect and Restore Living Resources	$1,300,000	Suffolk	Brookhaven

Protection/ Restoration of Coastal Bird Habitat	Town of Southampton	2 - Protect and Restore Living Resources	$200,000	Suffolk	Southampton
Protection of Coastal Habitats and Acquisition of Open Space	Town of Southampton	2 - Protect and Restore Living Resources	$199,329,174	Suffolk	Southampton
Programs to Increase Shellfish Populations	Town of Southampton	2 - Protect and Restore Living Resources	$100,000	Suffolk	Southampton
Assessing the Response of Juvenile and Adult Hard Clams to the New Breach in Great South Bay	FINS-NPS and Stony Brook University	2 - Protect and Restore Living Resources	$98,193	Suffolk	Brookhaven
Assessing the Response of Great South Bay Plankton Community to Hurricane Sandy	FINS-NPS and Stony Brook University	2 - Protect and Restore Living Resources	$594,118	Suffolk	Brookhaven
Effects of a Storm-induced Barrier Breach on Community Assemblages and Ecosystem Structure	FINS-NPS and Stony Brook University	2 - Protect and Restore Living Resources	$150,000	Suffolk	Brookhaven
Assessing the Response of the GSB Estuarine Fauna to Hurricane Sandy: Focus on Nekton Utilization of Seagrass Habitats	FINS-NPS and Stony Brook University	2 - Protect and Restore Living Resources	$327,633	Suffolk	Brookhaven
Northeast Coastal and Barrier Network Saltmarsh Monitoring Program	FINS-NPS	2 - Protect and Restore Living Resources	$75,000	Suffolk	Brookhaven

Impacts of Superstorm Sandy and White-tailed Deer on Maritime Vegetation Recovery on Fire Island	FINS-NPS	2 - Protect and Restore Living Resources	$495,600	Suffolk	Brookhaven
Post-Hurricane Sandy Salt Marsh Change Detection and Development of Salt Marsh Change Detection Protocol for the Northeast Coastal Parks	FINS-NPS and University of Rhode Island	2 - Protect and Restore Living Resources	$200,000	Suffolk	Brookhaven
Submerged Marine Habitat Mapping in GSB	FINS-NPS and University of Rhode Island	2 - Protect and Restore Living Resources	$780,000	Suffolk	Brookhaven
Long Island Volunteer Alewife Survey (LIVAS)	Seatuck Environmental Association	2 - Protect and Restore Living Resources	$5,000	Nassau/Suffolk	All
Massapequa Creek Fishway Monitoring	Seatuck Environmental Association	2 - Protect and Restore Living Resources	$60,000	Nassau	Massapequa
Carlls River Fishway	Seatuck Environmental Association	2 - Protect and Restore Living Resources	$95,000	Suffolk	Babylon
Seal Utilization and Site Fidelity	Coastal Research and Education Society of Long Island	2 - Protect and Restore Living Resources	$0	Suffolk	Southampton

Elevation Mapping of NPS Salt Marshes and other sites for Sea Level Rise Planning and Post Storm Evaluation	FINS and University of Rhode Island	2 - Protect and Restore Living Resources	$768,864	Suffolk	Brookhaven
Long Island Wetlands Trends Analysis	NYS DEC	2 - Protect and Restore Living Resources	$300,000	Nassau/Suffolk	All
Coastal Atlas of Digital Data	NYS DOS	2 - Protect and Restore Living Resources	$1,670,000	Nassau/Suffolk	All
New York Marine Sciences Consortium	SUNY SoMAS	2 - Protect and Restore Living Resources	$50,000	Nassau/Suffolk	All
Atlantic Coastal Cooperative Statistic Program (ACCSP)	NYS DEC	2 - Protect and Restore Living Resources	$45,000	Nassau/Suffolk	All
Northeast Area Monitoring and Assessment Program (NEAMAP) Fish Survey	Atlantic States Marine Fisheries Commission (ASMFC)	2 - Protect and Restore Living Resources	$545,000	Nassau/Suffolk	All
Sea Level Rise Task Force	NYS Agencies	2 - Protect and Restore Living Resources	$80,000	Nassau/Suffolk	All
Sea Turtle Conservation and Research	OPRHP	2 - Protect and Restore Living Resources	$162,282	Nassau/Suffolk	All

Western Bays Water Quality Monitoring System	SUNY SoMAS and USGS	2 - Protect and Restore Living Resources	$820,282	Nassau/Suffolk	All
Landscaping and erosion control; installation of bird nesting structures	DOT	2 - Protect and Restore Living Resources	$3,100,000	Nassau/Suffolk	All
Acquisition of Three Open Space Properties	Nassau County	2 - Protect and Restore Living Resources	$876,000	Nassau	Hempstead
Hard Clam Stock Quality Assessment	Town of Hempstead	2 - Protect and Restore Living Resources	$51,050	Nassau	Hempstead
Middle Bay Oyster Seeding and Reef Development Program	Town of Hempstead	2 - Protect and Restore Living Resources	$116,406	Nassau	Hempstead
Tackapausha Pond Re-vegetation	Nassau County SWCD	2 - Protect and Restore Living Resources	$10,078	Nassau	Hempstead
Purchase and Installation of Cape American Beachgrass for Civic Beach Dune Restoration	Nassau County SWCD	2 - Protect and Restore Living Resources	$8,100	Nassau	Hempstead
Great South Bay EBM Demonstration Area	NYS DOS	2 - Protect and Restore Living Resources	$606,456	Suffolk	Babylon/Islip/Brookhaven

Great South Bay Modeling Project	SUNY SoMAS	2 - Protect and Restore Living Resources	$650,000	Suffolk	Babylon/Islip/Brookhaven
Pilot Ocean Observing System in the Great South Bay	SUNY SoMAS	2 - Protect and Restore Living Resources	$510,000	Suffolk	Babylon/Islip/Brookhaven
Seagrass Task Force/Report	NYS DEC	2 - Protect and Restore Living Resources	$350,000	Nassau/Suffolk	All
Winter Flounder Study	NYS DEC	2 - Protect and Restore Living Resources	$250,000	Nassau/Suffolk	All
Great South Bay Fishery Survey	NYS DEC	2 - Protect and Restore Living Resources	$75,000	Suffolk	Babylon/Islip/Brookhaven
Continuation of Fire Island Inlet to Montauk Point (FIMP) Reformulation Study	USACE	2 - Protect and Restore Living Resources	$1,000,000	Suffolk	Brookhaven
Multi-year Strategic Conservation Plan for Fire Island	Fire Island Land Trust	2 - Protect and Restore Living Resources	$25,000	Suffolk	Brookhaven
Cooperative Management and Education	Fire Island Land Trust	2 - Protect and Restore Living Resources	$25,000	Suffolk	Brookhaven

Fish ladder Installation at Carmans River	NYS DOT	2 - Protect and Restore Living Resources	$200,000	Suffolk	Brookhaven
Installation of Fish Passage at Penataquit Creek/ Drainage Improvements	NYS DOT	2 - Protect and Restore Living Resources	$16,500,000	Suffolk	Islip
Inventory and Analysis of Barriers to Fish Passage for Six SSER Tributaries	NYS DOS	2 - Protect and Restore Living Resources	$29,157	Suffolk	Babylon/Islip/Brookhaven
Removal of Japanese Knotweed at Quogue Wildlife Refuge	Suffolk County SWCD	2 - Protect and Restore Living Resources	$7,500	Suffolk	Southampton
Seabeach Amaranth Survey	USFWS	2 - Protect and Restore Living Resources	$0	Suffolk	Brookhaven
Shellfish Monitoring Program	NYS DEC	2 - Protect and Restore Living Resources	$0	Nassau/Suffolk	All
NYS Open Space Conservation Plan	NYS DEC	2 - Protect and Restore Living Resources	$0	Nassau/Suffolk	All
Brookside Preserve Improvement in Freeport	Nassau County	2 - Protect and Restore Living Resources	$66,000	Nassau	Freeport

Solar Powered Trash Compactors	Nassau County	2 - Protect and Restore Living Resources	$32,000	Nassau	Hempstead/Oyster Bay
Acquisition of Parkway Drive Property	Nassau County	2 - Protect and Restore Living Resources	$4,865,000	Nassau	Hempstead
Acquisition of Gold Property	Nassau County	2 - Protect and Restore Living Resources	$635,000	Nassau	Hempstead
Restoration of Diadromous Fish in Massapequa Creek	Nassau County	2 - Protect and Restore Living Resources	$173,000	Nassau	Oyster Bay
Hard Clam Restoration in the Great South Bay	Suffolk County	2 - Protect and Restore Living Resources	$1,910,942	Suffolk	Islip
Great South Bay Clam Restoration Working Group	Suffolk County	2 - Protect and Restore Living Resources	$0	Suffolk	Babylon/Islip/Brookhaven/Southampton
Long Island Native Grass Initiative	Suffolk County	2 - Protect and Restore Living Resources	$22,700	Suffolk	Babylon/Islip/Brookhaven/Southampton
Suffolk County Farm Nitrogen Reduction and Irrigation Upgrade	Suffolk County	2 - Protect and Restore Living Resources	$0	Suffolk	Brookhaven

Acquisition of Farmland Development Rights to Cuomo Family Farm	Suffolk County	2 - Protect and Restore Living Resources	$5,000,000	Suffolk	Brookhaven
Open Space Acquisition Lists	Suffolk County	2 - Protect and Restore Living Resources	$0	Suffolk	Babylon/Islip/Brookhaven/Southampton
Open Space Acquisition	Suffolk County	2 - Protect and Restore Living Resources	$0	Suffolk	Babylon/Islip/Brookhaven/Southampton
Growth and seeding of shellfish into South Oyster Bay	Town of Oyster Bay	2 - Protect and Restore Living Resources	$0	Nassau	Oyster Bay
Comprehensive Shellfish Management Program,	Town of Islip	2 - Protect and Restore Living Resources	$0	Suffolk	Islip
Cooperative Agreement for Shellfish Research and Education	Town of Islip	2 - Protect and Restore Living Resources	$0	Suffolk	Islip
Bay Management Program	Town of Babylon	2 - Protect and Restore Living Resources	$0	Suffolk	Babylon
Shinnecock Bay Restoration Initiative	SUNY SoMAS	2 - Protect and Restore Living Resources	$10,000	Suffolk	Southampton

Long Island Horseshoe Crab Research	Dowling College:	2 - Protect and Restore Living Resources	$0	Nassau/Suffolk	All
Aquatic Habitat Restoration on the Swan River	Town of Brookhaven	2 - Protect and Restore Living Resources	$ 360,000.00	Suffolk	Brookhaven
Aquatic Habitat Restoration	Village of Freeport	2 - Protect and Restore Living Resources	$ 50,000.00	Nassau	Freeport
Beaver Dam Creek (West) Tidal Wetlands Restoration Project	Suffolk County DPW	2 - Protect and Restore Living Resources	$ 275,000.00	Suffolk	
Carmans River Fish Passage	Suffolk County DPW	2 - Protect and Restore Living Resources	$ 252,000.00	Suffolk	Brookhaven
Carmans River Fish Passage	Town of Brookhaven	2 - Protect and Restore Living Resources	$ 650,000.00	Suffolk	Brookhaven
Developing a Hard Clam Spawner Sanctuary Management Plan for Eastern and Central Great South Bay	Town of Brookhaven	2 - Protect and Restore Living Resources	$ 150,000.00	Suffolk	Brookhaven
Great South Bay Hard Clam Sustainability	Town of Brookhaven	2 - Protect and Restore Living Resources	$ 27,000.00	Suffolk	Brookhaven

Hard Clam Restoration in Western Great South Bay	Town of Islip	2 - Protect and Restore Living Resources	$ 125,000.00	Suffolk	Brookhaven
Heisser Lane Drain Improvement Project	Nassau County	2 - Protect and Restore Living Resources	$ 250,000.00	Nassau	
Loft Pond Improvement Project	Nassau County	2 - Protect and Restore Living Resources	$ 200,000.00	Nassau	
Majorie Post Park Shoreline Restoration	Town of Oyster Bay	2 - Protect and Restore Living Resources	$ 122,650.00	Nassau	Oyster Bay
Millburn Creek Improvement	Nassau County	2 - Protect and Restore Living Resources	$ 102,609.00	Nassau	Freeport
Mill Pond Restoration Project	Nassau County	2 - Protect and Restore Living Resources	$ 300,000.00	Nassau	Hempstead
Mud Creek Fish Passage	Suffolk County DPW	2 - Protect and Restore Living Resources	$ 186,000.00	Suffolk	
Planning for Eelgrass and Bay Scallop Restoration	Town of Southampton	2 - Protect and Restore Living Resources	$ 100,000.00	Suffolk	Southampton

Salt Marsh Erosion Trend Analysis	Town of Hempstead	2 - Protect and Restore Living Resources	$ 15,000.00	Nassau	Hempstead
Sea Breeze Habitat Restoration	Village of Freeport	2 - Protect and Restore Living Resources	$ 129,628.00	Nassau	Freeport
Tackapausha Pond Improvements	Nassau County	2 - Protect and Restore Living Resources	$ 5,775.00	Nassau	Hempstead
Tanglewood Preserve Improvement Project	Nassau County	2 - Protect and Restore Living Resources	$ 600,000.00	Nassau	Rockville Centre
Beaver Dam Creek Tidal Wetlands Restoration Project Phase I	Town of Brookhaven	2 - Protect and Restore Living Resources	$ 80,000.00	Suffolk	Brookhaven
Beaver Dam Creek Tidal Wetlands Restoration Project Phase II	Town of Brookhaven	2 - Protect and Restore Living Resources	$ 360,000.00	Suffolk	Brookhaven
Great South Bay - Restoration of Hard Clam Breeding Habitat	Town of Brookhaven	2 - Protect and Restore Living Resources	$ 50,000.00	Suffolk	Brookhaven
Moriches Bay Hard Clam Stock Assessment	Town of Southampton	2 - Protect and Restore Living Resources	$ 24,000.00	Suffolk	Southampton

Construction of Oak Beach Park Amenities	Town of Babylon	3 - Expand Public Use and Enjoyment	$ 300,000.00	Suffolk	Babylon
Construction of Public Amenities at Oak Beach Park	Town of Babylon	3 - Expand Public Use and Enjoyment	$ 500,000.00	Suffolk	Babylon
Construction of Talfor Basin Waterfront Promenade	Village of East Rockaway	3 - Expand Public Use and Enjoyment	$ 100,000.00	Nassau	East Rockaway
Construction of Talfor Boat Basin Public Plaza	Village of East Rockaway	3 - Expand Public Use and Enjoyment	$ 100,000.00	Nassau	East Rockaway
Design and Construction of Shinnecock Canal Park Bayway	Town of Southampton	3 - Expand Public Use and Enjoyment	$ 100,000.00	Suffolk	Southampton
Maritime Center Action Plan and Visitors Center	Village of Freeport	3 - Expand Public Use and Enjoyment	$ 200,000.00	Nassau	Freeport
Planning for Southampton/South Shore Estuary Reserve	Town of Southampton	3 - Expand Public Use and Enjoyment	$ 80,000.00	Suffolk	Southampton
South Shore Bikeway Connections Study	Town of Oyster Bay	3 - Expand Public Use and Enjoyment	$ 17,000.00	Nassau	Oyster Bay

Lido Beach Marine Conservation Area	Town of Hempstead	3 - Expand Public Use and Enjoyment	$ 100,000.00	Nassau	Hempstead
Oak Beach Park Special Management Area Plan	Town of Babylon	3 - Expand Public Use and Enjoyment	$ 200,000.00	Suffolk	Babylon
South Shore Bayway Strategic Implementation and Marketing Plan	NYS DOS	3 - Expand Public Use and Enjoyment of the Estuary	$180,000	Nassau/Suffolk	All
Lido Nature Preserve Boardwalk and Signage	Hempstead (T)	3 - Expand Public Use and Enjoyment of the Estuary	$236,600	Nassau	Hempstead
Wantagh State Parkway Pedestrian/Bike Shared-Use Path Safety Enhancement	NYS DOT	3 - Expand Public Use and Enjoyment of the Estuary	$700,000	Nassau	Hempstead
Jones Beach State Park West Bathhouse Rehabilitation	OPRHP	3 - Expand Public Use and Enjoyment of the Estuary	$750,000	Nassau	Hempstead
Stabilize and Restore Jones Beach State Park Central Mall Buildings	OPRHP	3 - Expand Public Use and Enjoyment of the Estuary	$750,000	Nassau	Hempstead

Rehabilitate Zach's Bay Comfort Station at Jones Beach State Park	OPRHP	3 - Expand Public Use and Enjoyment of the Estuary	$400,000	Nassau	Hempstead
Improving Public Access on the Mill River	East Rockaway (V)	3 - Expand Public Use and Enjoyment of the Estuary	$469,000	Nassau	East Rockaway
Park Development and Shared-Use Path	Lynbrook (V)	3 - Expand Public Use and Enjoyment of the Estuary	$100,000	Nassau	Lynbrook
South Shore Blueway Trail	Freeport (V)	3 - Expand Public Use and Enjoyment of the Estuary	$100,000	Nassau	Freeport Village
Northeast Park Rehabilitation	Freeport (V)	3 - Expand Public Use and Enjoyment of the Estuary	$100,000	Nassau	Freeport Village
Design and Construction of SSER Bikeway Trail	Oyster Bay (T)	3 - Expand Public Use and Enjoyment of the Estuary	$403,346	Nassau	Oyster Bay
Geiger Lake Land Acquisitions for new Trailways	Babylon (T)	3 - Expand Public Use and Enjoyment of the Estuary	$200,000	Nassau	Babylon

Robert Moses State Park East Boat Basin Rehabilitation	OPRHP	3 - Expand Public Use and Enjoyment of the Estuary	$3,318,500	Suffolk	Babylon
Robert Moses State Park Renovations (Bathhouse)	OPRHP	3 - Expand Public Use and Enjoyment of the Estuary	$1,000,000	Suffolk	Babylon
Robert Moses State Park Beach Nourishment	OPRHP	3 - Expand Public Use and Enjoyment of the Estuary	$1,000,000	Suffolk	Babylon
Belmont Lake State Park Parking Lot Improvements	OPRHP	3 - Expand Public Use and Enjoyment of the Estuary	$800,000	Suffolk	Babylon
Belmont Lake State Park Electrical Upgrades	OPRHP	3 - Expand Public Use and Enjoyment of the Estuary	$50,000	Suffolk	Babylon
Captree State Park Bulkhead Rehabilitatio	OPRHP	3 - Expand Public Use and Enjoyment of the Estuary	$400,000	Suffolk	Babylon
Captree State Park Fuel Dock Electric Upgrades	OPRHP	3 - Expand Public Use and Enjoyment of the Estuary	$22,000	Suffolk	Babylon

Captree State Park Fuel Line Replacement	OPRHP	3 - Expand Public Use and Enjoyment of the Estuary	$225,000	Suffolk	Babylon
Homan Avenue Harbor Waterfront Park	Islip (T)	3 - Expand Public Use and Enjoyment of the Estuary	$100,000	Suffolk	Islip
Nicoll Grist Mill Restoration at Connetquot State Park	Friends of Connetquot, Inc.	3 - Expand Public Use and Enjoyment of the Estuary	$548,020	Suffolk	Islip
Patchogue Maritime Heritage Trail	Patchogue (V)	3 - Expand Public Use and Enjoyment of the Estuary	$150,350	Suffolk	Patchogue
Reconstruction of Shorefront Park	Patchogue (V)	3 - Expand Public Use and Enjoyment of the Estuary	$183,408	Suffolk	Patchogue
Terry Ketcham Inn Restoration	Ketcham Inn Foundation, Inc.	3 - Expand Public Use and Enjoyment of the Estuary	$150,000	Suffolk	Brookhaven
Harold Walker Memorial Park Trail	Nassau (C)	3 - Expand Public Use and Enjoyment of the Estuary	$30,000	Nassau	Hempstead

Fitness Trail at Cedar Creek Park	Nassau (C)	3 - Expand Public Use and Enjoyment of the Estuary	$15,000	Nassau	Hempstead
Athletic Field at Cedar Creek Park	Nassau (C)	3 - Expand Public Use and Enjoyment of the Estuary	$1,200,000	Nassau	Hempstead
Artificial Field at 59 East Fulton Street in Roosevelt	Nassau (C)	3 - Expand Public Use and Enjoyment of the Estuary	$130,000	Nassau	Hempstead
Wantagh Park Marine Playground	Nassau (C)	3 - Expand Public Use and Enjoyment of the Estuary	$400,000	Nassau	Hempstead
Greis Park Fitness Trail and Lighting	Lynbrook (V)	3 - Expand Public Use and Enjoyment of the Estuary	$90,000	Nassau	Hempstead
Clark Street Park Improvement Project	Long Beach (City)	3 - Expand Public Use and Enjoyment of the Estuary	$1,500,000	Nassau	Long Beach (City)
Bay Shore Marina Improvements, Phase III	Islip (T)	3 - Expand Public Use and Enjoyment of the Estuary	$2,000,000	Suffolk	Islip

South Shore Blueway Trail Implementation	Nassau (C)	3 - Expand Public Use and Enjoyment of the Estuary	$240,000	Nassau	All
Marketing Promotion	Long Beach (City)	3 - Expand Public Use and Enjoyment of the Estuary	$300,000	Nassau	Long Beach (City)
Construction of Lido Nature Preserve Boardwalk and Public Viewing Aids	Hempstead (T)	3 - Expand Public Use and Enjoyment of the Estuary	$118,300	Nassau	Hempstead
Natural Shoreline Restoration along "The Path" in South Valley Stream	Hempstead (T)	3 - Expand Public Use and Enjoyment of the Estuary	$1,700,000	Nassau	Hempstead
Carlls River Tributary/Watershed Project	Babylon (T)	3 - Expand Public Use and Enjoyment of the Estuary	$3,505,000	Suffolk	Babylon
Construction of Public Amenities at Oak Beach Park	Babylon (T)	3 - Expand Public Use and Enjoyment of the Estuary	$500,000	Suffolk	Babylon
Kayak Launch Sites	Babylon (T)	3 - Expand Public Use and Enjoyment of the Estuary	$1,000	Suffolk	Babylon

Downtown Copiague Pedestrian Roadway and Streetscape Improvements Project	Babylon (T)	3 - Expand Public Use and Enjoyment of the Estuary	$105,000	Suffolk	Babylon
Benjamin's Beach Repairs	Islip (T)	3 - Expand Public Use and Enjoyment of the Estuary	$1,611,616	Suffolk	Islip
Old Mill Pond	Islip (T) & Suffolk (C)	3 - Expand Public Use and Enjoyment of the Estuary	$684,145	Suffolk	Islip
Homan Avenue Harbor View Park	Islip (T)	3 - Expand Public Use and Enjoyment of the Estuary	$100,000	Suffolk	Islip
Ocean Ave. Dock	Islip (T)	3 - Expand Public Use and Enjoyment of the Estuary	$100,000	Suffolk	Islip
Atlantique Beach Repairs	Islip (T)	3 - Expand Public Use and Enjoyment of the Estuary	$1,991,680	Suffolk	Islip
Sequams Lane Center West Islip	Islip (T)	3 - Expand Public Use and Enjoyment of the Estuary	$0	Suffolk	Islip

Construction of Dune for Breach Protection	Southampton (T)	3 - Expand Public Use and Enjoyment of the Estuary	$25,000	Suffolk	Southampton
The South Shore Blueway Trail	Freeport (V)	3 - Expand Public Use and Enjoyment of the Estuary	$100,000	Nassau	Freeport Village
South Shore Blueway Trail Kayak Launch at Waterfront Park	Freeport (V)	3 - Expand Public Use and Enjoyment of the Estuary	$32,000	Nassau	Freeport Village
South Shore Estuary Reserve Coastal Heritage Trail	Freeport (V)	3 - Expand Public Use and Enjoyment of the Estuary	$95,000	Nassau	Freeport Village
Construction of Waterfront Promenade and Fishing Pier	East Rockaway (V)	3 - Expand Public Use and Enjoyment of the Estuary	$300,000	Nassau	East Rockaway (V)
Mill River Access	East Rockaway (V)	3 - Expand Public Use and Enjoyment of the Estuary	$469,000	Nassau	East Rockaway (V)
Ocean Parkway Shared Use Path	NYS DOT	3 - Expand Public Use and Enjoyment of the Estuary	$4,800,000	Nassau	All

Maritime Traditions Program	Long Island Traditions	3 - Expand Public Use and Enjoyment of the Estuary	$50,000	Nassau/Suffolk	All
Stormwater Management Plan and Construction of Improvements in Mastic Beach/Smith Point of Shirley	The Mastic Beach and Smith Point of Shirley Planning Committee	3 - Expand Public Use and Enjoyment of the Estuary	$1,000,000	Suffolk	Brookhaven
Dredge Watch Hill and Sailors Haven Channels and Marinas	National Park Service, U.S. Department of the Interior, Fire Island National Seashore (FINS)	3 - Expand Public Use and Enjoyment of the Estuary	$2,900,000	Suffolk	All
Rehabilitation and Restoration of Aids to Navigation at Jones Inlet East Jetty and East Rockaway Inlet East Jetty	USACE	3 - Expand Public Use and Enjoyment of the Estuary	$4,200,000	Nassau	All
Old Ponquogue Bridge	Southampton (T)	3 - Expand Public Use and Enjoyment of the Estuary	$110,000	Suffolk	Southampton
Continuation of the Atlantic Coast of New York Monitoring Program (ACNYMP)	SUNY Stony Brook	3 - Protect and Restore Living Resources	$32,000	Nassau/Suffolk	All

Dredged Material Management Plan	NYS DOS	4 - Sustain and Expand the Estuary-Related Economy	$178,382	Nassau/Suffolk	All
Comprehensive County Vision for Water-Dependent Maritime Uses	Nassau (C)	4 - Sustain and Expand the Estuary-Related Economy	$170,000	Nassau	All
Sayville and West Sayville LWRP	Islip (T)	4 - Sustain and Expand the Estuary-Related Economy	$100,000	Suffolk	Islip
Fire Island Inlet and Shore Westerly to Jones Inlet Dredging	USACE	4 - Sustain and Expand the Estuary-Related Economy	$9,000,000	Nassau/Suffolk	All
Preparation of LWRP	Southampton (T)	4 - Sustain and Expand the Estuary-Related Economy	$200,000	Suffolk	Southampton
Shinnecock Inlet Federal Navigation Channel	USACE	4 - Sustain and Expand the Estuary-Related Economy	$8,500,000	Suffolk	Southampton

Great South Bay Federal Navigation Channel	USACE	4 - Sustain and Expand the Estuary-Related Economy	$180,000	Suffolk	All
Long Island Intracoastal Waterway Federal Navigation Channel	USACE	4 - Sustain and Expand the Estuary-Related Economy	$1,450,000	Suffolk	All
Gilgo Beach Shoreline Emergency Stabilization	FEMA	4 - Sustain and Expand the Estuary-Related Economy	$888,000	Suffolk	Babylon
Dredging Oversight	Suffolk (C)	4 - Sustain and Expand the Estuary-Related Economy	$0	Suffolk	All
Moriches Inlet Federal Navigation Channel	Suffolk (C)	4 - Sustain and Expand the Estuary-Related Economy	$11,400,000	Suffolk	All
Replenishment of Shoreline in Center Moriches	Brookhaven (T)	4 - Sustain and Expand the Estuary-Related Economy	$0	Suffolk	Brookhaven

New York Rising Community Reconstruction Program (NYRCR)	NYS DOS, GOSR	4 - Sustain and Expand the Estuary-related Economy	$6,300,000	Nassau/Suffolk	All
Comprehensive County Vision for Water-Dependent Maritime Uses	Nassau County	4 - Sustain and Expand the Estuary-related Economy	$170,000	Nassau	Hempstead/Oyster Bay
Baldwin Downtown and Commercial Corridor Resiliency Plan	Nassau County	4 - Sustain and Expand the Estuary-related Economy	$800,000	Nassau	Hempstead
Drainage Improvements in Barnum Island, Villages of Island Park and Harbor Isle	Nassau County	4 - Sustain and Expand the Estuary-related Economy	$9,910,000	Nassau	Hempstead
East Rockaway/ Bay Park Hydrology and Hydraulic Study and Lawson Avenue Drainage Improvements	Nassau County	4 - Sustain and Expand the Estuary-related Economy	$400,000	Nassau	Hempstead
Stormwater Infrastructure Upgrade in Cedarhurst, Hewlett, Inwood, Woodmere, and the Villages of Hewlett Neck and Lawrence	Nassau County	4 - Sustain and Expand the Estuary-related Economy	$17,450,000	Nassau	Hempstead

Countywide Stormwater Check Valves Flood Mitigation Project	Nassau County	4 - Sustain and Expand the Estuary-related Economy	$1,600,000	Nassau	Hempstead/Oyster Bay
Beech Street Park Avenue Drainage Improvement Project	Nassau County	4 - Sustain and Expand the Estuary-related Economy	$1,000,000	Nassau	Long Beach
Reconstruction of Boardwalk	City of Long Beach	4 - Sustain and Expand the Estuary-related Economy	$44,000,000	Nassau	Long Beach
Northside Critical Infrastructure Flood Protection	City of Long Beach	4 - Sustain and Expand the Estuary-related Economy	$12,936,000	Nassau	Long Beach
Recreation Center, Senior Center, Ice Arena, and Waterfront Park repairs	City of Long Beach	4 - Sustain and Expand the Estuary-related Economy	$9,150,000	Nassau	Long Beach
Creating Resilience: A Planning Initiative	City of Long Beach	4 - Sustain and Expand the Estuary-related Economy	$150,000	Nassau	Long Beach
Dune Reconstruction	City of Long Beach	4 - Sustain and Expand the	$5,000,000	Nassau	Long Beach

		Estuary-related Economy			
Local Waterfront Revitalization Plan for the City of Long Beach	City of Long Beach	4 - Sustain and Expand the Estuary-related Economy	$80,000	Nassau	Long Beach
North Shore Bulkheading	City of Long Beach	4 - Sustain and Expand the Estuary-related Economy	$12,450,000	Nassau	Long Beach
East Baldwin Road Raising	Town of Hempstead	4 - Sustain and Expand the Estuary-related Economy	$2,000,000	Nassau	Hempstead
Drainage Improvements in Oceanside	Town of Hempstead	4 - Sustain and Expand the Estuary-related Economy	$10,320,000	Nassau	Hempstead
Drainage Improvements South of Merrick Road in Bellmore, Merrick, Seaford, and Wantagh	Town of Hempstead	4 - Sustain and Expand the Estuary-related Economy	$6,250,000	Nassau	Hempstead
Meadowmere Park Power Generation	Town of Hempstead	4 - Sustain and Expand the Estuary-related Economy	$500,000	Nassau	Hempstead

Revetment Repair/Reconstruction in Lido Beach and Point Lookout	Town of Hempstead	4 - Sustain and Expand the Estuary-related Economy	$3,800,000	Nassau	Hempstead
Dredge and Pipeline, Purchase and Installation	Town of Hempstead	4 - Sustain and Expand the Estuary-related Economy	$1,100,000	Nassau	Hempstead
Local Waterfront Revitalization Plan for the Town of Oyster Bay	Town of Oyster Bay	4 - Sustain and Expand the Estuary-related Economy	$115,000	Nassau	Oyster Bay
Permanent Generators for Critical Community Facilities in Massapequa, East Massapequa, and Village of Massapequa Park	Town of Oyster Bay	4 - Sustain and Expand the Estuary-related Economy	$2,000,000	Nassau	Oyster Bay
Waterfront Resiliency Improvements	Town of Babylon	4 - Sustain and Expand the Estuary-related Economy	$3,000,000	Suffolk	Babylon
American Venice Bridges Improvements in Copiague	Town of Babylon	4 - Sustain and Expand the Estuary-related Economy	$8,000,000	Suffolk	Babylon

Generators for Critical Facilities in Village of Babylon and West Gilgo to Captree Communities	Town of Babylon	4 - Sustain and Expand the Estuary-related Economy	$1,125,000	Suffolk	Babylon
Comprehensive Drainage Infrastructure Master Plan and Construction of Phase 1 Improvements for the Village of Lindenhurst	Town of Babylon	4 - Sustain and Expand the Estuary-related Economy	$1,000,000	Suffolk	Babylon
Bay Shore Marina Phase II	Town of Islip	4 - Sustain and Expand the Estuary-related Economy	$0	Suffolk	Islip
Awixa Creek Dredging	Town of Islip	4 - Sustain and Expand the Estuary-related Economy	$0	Suffolk	Islip
East Islip Marina Pumpout Station Dredging	Town of Islip	4 - Sustain and Expand the Estuary-related Economy	$5,000	Suffolk	Islip
Marina GIS Project	Town of Islip	4 - Sustain and Expand the Estuary-related Economy	$0	Suffolk	Islip

Local Waterfront Revitalization Plan for Sayville and West Sayville	Town of Islip	4 - Sustain and Expand the Estuary-related Economy	$100,000	Suffolk	Islip
West Avenue Dock	Town of Islip	4 - Sustain and Expand the Estuary-related Economy	$407,070	Suffolk	Islip
Greater Bay Shore Generator Resiliency Project	Town of Islip	4 - Sustain and Expand the Estuary-related Economy	$1,425,000	Suffolk	Islip
Community-Wide Drainage Plan and Construction of Phase 1 Improvements in West Islip	Town of Islip	4 - Sustain and Expand the Estuary-related Economy	$1,300,000	Suffolk	Islip
Check Valves on Drainage Outfalls in Oakdale/West Sayville	Town of Islip	4 - Sustain and Expand the Estuary-related Economy	$300,000	Suffolk	Islip
Hudson Canal Dredging Plan and Construction of Visitor Center	Village of Freeport	4 - Sustain and Expand the Estuary-related Economy	$400,000	Nassau	Freeport
Electrical Cable Channel Crossing Improvements	Village of Freeport	4 - Sustain and Expand the Estuary-related Economy	$3,000,000	Nassau	Freeport

Backup Power Generation for Critical Facilities on Fire Island	Village of Saltaire	4 - Sustain and Expand the Estuary-related Economy	$610,000	Suffolk	Saltaire
Local Waterfront Revitalization Plan for Amityville/Great South Bay	Village of Amityville	4 - Sustain and Expand the Estuary-related Economy	$45,000	Suffolk	Amityville
Local Waterfront Revitalization Plan for the Village of Patchogue	Village of Patchogue	4 - Sustain and Expand the Estuary-related Economy	$60,000	Suffolk	Patchogue
Stormwater Infra-structure Upgrades	Village of Hewlett Harbor	4 - Sustain and Expand the Estuary-related Economy	$3,000,000	Nassau	Hewett Harbor
Hardening of Greater Atlantic Beach Water Reclamation Plant	Greater Atlantic Beach Water Reclamation Distict	4 - Sustain and Expand the Estuary-related Economy	$720,000	Suffolk	Atlantic Beach
Maintenance Dredging of Long Island Intracoastal Waterway Federal Navigation Channel, Moriches Bay Reach	USACE	4 - Sustain and Expand the Estuary-related Economy	$1,977,000	Suffolk	Brookhaven

Maintenance Dredging of East Rockaway Inlet Federal Navigation Channel	USACE	4 - Sustain and Expand the Estuary-related Economy	$4,912,000	Nassau	Hempstead
Maintenance Dredging of Jones Inlet Federal Navigation Channel	USACE	4 - Sustain and Expand the Estuary-related Economy	$9,940,000	Nassau	Hempstead
Maintenance Dredging of Great South Bay Federal Navigation Channel	USACE	4 - Sustain and Expand the Estuary-related Economy	$2,300,000	Suffolk	Islip
Emergency Repairs to Ocean Parkway & Robert Moses Causeway	NYS DOT	4 - Sustain and Expand the Estuary-related Economy	$33,000,000	Suffolk	Islip
Acquisition Coordination, Compilation, Data Management, and Change Analysis of LIDAR and Other Geospatial Data Collected Pre- and Post-Hurricane Sandy	FINS and University of Rhode Island	4 - Sustain and Expand the Estuary-related Economy	$775,500	Suffolk	Brookhaven
City of Long Beach Step 1 Brownfield Study	City of Long Beach	4 - Sustain and Expand the Estuary-related Economy	$ 65,000.00	Nassau	Long Beach

Construction of East Rockaway Waterfront Revitalization Project	Village of East Rockaway	4 - Sustain and Expand the Estuary-related Economy	$ 150,000.00	Nassau	East Rockaway
Harbor Management Planning and Local Waterfront Revitalization Program	Town of Hempstead	4 - Sustain and Expand the Estuary-related Economy	$ 75,000.00	Nassau	Hempstead
Implementation Strategies and Studies for Patchogue River Redevelopment	Village of Patchogue	4 - Sustain and Expand the Estuary-related Economy	$ 75,000.00	Suffolk	Patchogue
Local Waterfront Revitalization Program	Village of Amityville	4 - Sustain and Expand the Estuary-related Economy	$ 22,500.00	Suffolk	Amityville
Local Waterfront Revitalization Program	Town of Oyster Bay	4 - Sustain and Expand the Estuary-related Economy	$ 57,500.00	Nassau	Oyster Bay
Quality Communities Demonstration Project	Village of Hempstead	4 - Sustain and Expand the Estuary-related Economy	$ 150,000.00	Nassau	Hempstead

Wyandanch Step 2 Brownfield Study	Town of Babylon	4 - Sustain and Expand the Estuary-related Economy	$ 258,170.00	Suffolk	Babylon
City of Long Beach Local Waterfront Revitalization Program	City of Long Beach	4 - Sustain and Expand the Estuary-related Economy	$ 80,000.00	Nassau	Long Beach
Completion of the Village of Patchogue Local Waterfront Revitalization Program	Village of Patchogue	4 - Sustain and Expand the Estuary-related Economy	$ 60,000.00	Suffolk	Patchogue
East Rockaway Waterfront Revitalization Program	Village of East Rockaway	4 - Sustain and Expand the Estuary-related Economy	$ 60,000.00	Nassau	East Rockaway
Village of Lindenhurst Local Waterfront Revitalization Program	Village of Lindenhurst	4 - Sustain and Expand the Estuary-related Economy	$ 50,000.00	Nassau	Lindenhurst
Waterfront Urban Environmental Education Center	City of Long Beach	4 - Sustain and Expand the Estuary-related Economy	$ 200,000.00	Nassau	Long Beach
SSER Office Operation	NYS DOS	5 - Increase Education,	$569,310	Nassau/Suffolk	All

		Outreach and Stewardship			
EBM Education Exhibits and Materials	OPRHP	5 - Increase Education, Outreach and Stewardship	$187,500	Nassau/Suffolk	All
Light Detection and Ranging (LiDAR) Mapping	Federal Emergency Management Agency (FEMA)	5 - Increase Education, Outreach and Stewardship	$625,000	Suffolk	All
Fire Island General Management Plan	National Park Service, U.S. Department of the Interior, Fire Island National Seashore (FINS)	5 - Increase Education, Outreach and Stewardship	$0	Nassau/Suffolk	All
Biennial Science Conferences	National Park Service, U.S. Department of the Interior, Fire Island National Seashore (FINS)	5 - Increase Education, Outreach and Stewardship	$0	Nassau/Suffolk	All
SSER Stormwater Treatment Technology Workshop	NYS DOS	5 - Increase Education, Outreach and Stewardship	$0	Nassau/Suffolk	All

Technical Assistance	SSER Office	5 - Increase Education, Outreach and Stewardship	$0	Nassau/Suffolk	All
Public Outreach and Education	SSER Office	5 - Increase Education, Outreach and Stewardship	$0	Nassau/Suffolk	All
SSERC Meetings	SSER Office	5 - Increase Education, Outreach and Stewardship	$0	Nassau/Suffolk	All
SSERC Stewardship Award	SSER Office	5 - Increase Education, Outreach and Stewardship	$0	Nassau/Suffolk	All
CAC SSER Stewardship Certificate Recognition Awar	SSER Office	5 - Increase Education, Outreach and Stewardship	$0	Nassau/Suffolk	All
Outdoor Education Programs	Nassau County Board of Cooperative Education Services (BOCES)	5 - Increase Education, Outreach and Stewardship	$0	Nassau	All
Sewer Summits	Suffolk (C)	5 - Increase Education,	$0	Suffolk	All

		Outreach and Stewardship			
Outdoor Education Programs	Western Suffolk County Board of Cooperative Education Services (BOCES)	5 - Increase Education, Outreach and Stewardship	$0	Suffolk	All
Center for Estuarine, Environmental and Coastal Oceans Monitoring	Dowling College	5 - Increase Education, Outreach and Stewardship	$0	Nassau/Suffolk	All
Coastal Resilience Long Island	The Nature Conservancy Long Island	5 - Increase Education, Outreach and Stewardship	$0	Nassau/Suffolk	All
Shipboard Oceanography	New York State Marine Education Association (NYSMEA)	5 - Increase Education, Outreach and Stewardship	$7,500	Nassau/Suffolk	All
South Shore Estuary Learning Facilitator's Program (sSELF)	New York State Marine Education Association (NYSMEA)	5 - Increase Education, Outreach and Stewardship	$15,000	Nassau/Suffolk	All

Annual Conferences	New York State Marine Education Association (NYSMEA)	5 - Increase Education, Outreach and Stewardship	$0	Nassau/Suffolk	All
Beach Clean-up	New York State Marine Education Association (NYSMEA)	5 - Increase Education, Outreach and Stewardship	$0	Nassau	All
Design and Installation of Wayside Signage	Islip (T)	5 - Increase Education, Outreach and Stewardship	$80,000	Suffolk	Islip
Design and Installation of Wayside Signage	Patchogue (V)	5 - Increase Education, Outreach and Stewardship	$150,350	Suffolk	Patchogue (V)
Marine Biology Programs	Nassau County Board of Cooperative Educational Services (BOCES)	5 - Increase Education, Outreach and Stewardship	$760,858	Nassau	All
Marine Biology Programs	Western Suffolk County Board of Cooperative Educational Services (BOCES Outdoor Education Unit)	5 - Increase Education, Outreach and Stewardship	$0	Suffolk	All

Green's Creek Watershed Monitoring Program	Sayville High School	5 - Increase Education, Outreach and Stewardship	$250	Suffolk	Islip
Removal of Marine Debris in Nassau County	Hofstra University	5 - Increase Education, Outreach and Stewardship	$169,138	Nassau	All
Lido Beach Marine Conservation Area, NYS Coastal Resources Interpretive Program Signage Project	Hempstead (T)	5 - Increase Education, Outreach and Stewardship	$11,320	Nassau	Hempstead
Saltmarsh Education and Interpretation K-12 and above	Hempstead (T)	5 - Increase Education, Outreach and Stewardship	$0	Nassau	Hempstead
Educational Medallions	Hempstead (T)	5 - Increase Education, Outreach and Stewardship	$50,000	Nassau	Hempstead
Design and Installation of Wayside Interpretive Exhibits	Town of Islip	5 - Increase Education, Outreach, and Stewardship	$ 40,000	Suffolk	Islip

Long Island Marine Education Center	Village of Freeport	5 - Increase Education, Outreach, and Stewardship	$ 20,000	Nassau	Freeport
Conceptual Design of Waterfront Urban Environmental Center	City of Long Beach	5 - Increase Education, Outreach, and Stewardship	$ 300,000	Nassau	Long Beach
Long Island Marine Education Center Coastal Education Project	Village of Freeport	5 - Increase Education, Outreach, and Stewardship	$ 40,000	Nassau	Freeprot
SSER Coastal Heritage Trail	Village of Freeport	6 - Other	$ 95,000	Nassau	Freeport
Implementation of SSER Comprehensive Management Plan	Town of Brookhaven	6 - Other	$ 100,000	Suffolk	Brookhaven
Implementation of SSER Comprehensive Management Plan	Town of Oyster Bay	6- Other	$ 176,000	Nassau	Oyster Bay

Appendix 3:
Long Island South Shore Estuary Reserve Comprehensive Management Plan 2022 – Response to Comments

Acknowledgements:

Comment #1: People listed from Fire Island National Seashore need updating – Kelly Fellner is no longer with FINS and Kathy K retired. David Griese with FI Lighthouse Preservation Society retired. (M. Bilecki, Fire Island National Seashore, National Park Service)

Response: Acknowledgements updated with names identified in comment.

Comment #2: Include list of TAC and CAC members (M. Bilecki, Fire Island National Seashore, National Park Service)

Response: Comment noted.

Executive Summary:

Comment #3: Page v: The Education/outreach entry of $3,026,226 in the pie graph illustrates the need to transfer funds from other projects to provide for more education and outreach over the $660 million in funding for projects from 2001 to 2015. (Town of Brookhaven)

Response: Comment noted.

Comment #4: The description of the breadth of the SSER, as contained on page v of the Executive Summary, would benefit from clarification that the SSER takes in the interconnected network of southerly bays, tributaries and watersheds extending from the Village of Southampton and the Shinnecock Nation in the east, west to Nassau County, as the far easterly bays and coastal ponds within parts of Southampton and East Hampton Towns are outside its bounds. (Town of Southampton)

Response: Additional text added to further explain extent of SSER region.

Comment #5: Page vi: Need to mention that wetland losses and inadequate buffers, as a consequence of shoreline armoring and other causes, are likewise contributing to water quality degradation, as these naturally vegetated zones are critical for filtration, uptake and removal of contaminants. (Town of Southampton)

Response: Additional text added to address wetlands and buffers.

Comment #6: Page vii: Need to include in 2nd paragraph in human uses of the Reserve today's emerging multi-faceted sectors of recreation and tourism, such as birding, hiking, wildlife watching, kayaking, paddle boarding, swimming, outdoor photography, wind and kite surfing, bed and breakfasts, hotel accommodations and the second home industry, which contribute significant economic dollars to New York State and local towns. (Town of Southampton)

Response: Comment addressed on page vii, paragraph 2.

Comment #7: Page vii: Paragraph 4 could be strengthened to note that moderate to high residential densities, together with low elevations relative to sea level, put the SSER at particular high risk of storm and flood damage. (Town of Southampton)

Response: Comment addressed on page vii.

Comment #8: Mentions the nearly $460 million worth of projects that have been completed since 2001 benefitting the SSER. It would be useful, perhaps as an appendix to the CMP, to list each – or at least a sampling – of the projects with a brief summary. (Seatuck Environmental Association)

Response: A full list of projects added as Appendix 2.

Chapter 1: The Region

Comment #9: Overview: The Reserve's remarkable biodiversity and irreplaceable ecosystem services, together with its intrinsic values, are on par with its human consumptive uses and thus warrant equal attention and acknowledgement in the very first paragraph of page 2. (Town of Southampton)

Response: Comment addressed on page 2 paragraph 1.

Comment #10: Overview: The somewhat bleak picture, which is being painted, with regards to future water quality trends, in the "Eastern Bays" subsection on page 5, needs to be countered by noting that significant advancements have been made locally toward land preservation and upgrade of non-conforming septic systems, thereby offering promise in terms of water quality improvement. (Town of Southampton)

Response: The intent of the section is to talk about the overall the health of the sub-region in the Reserve and help the reader recognize that these are important issues. Each chapter highlights the current efforts to address issues in the Reserve.

Comment #11: Overview: Adjust the boundary in Map 1 to match the watershed boundary. At a minimum, you should describe and put a figure of the watershed boundary. Use the new USGS study: https://pubs.er.usgs.gov/publication/sir20215047 (The Nature Conservancy)

Response: The existing approved boundary identified in Map 1 is to show the extent of the Reserve management area.

Comment #12: Page 4, paragraph 4: "For this reason, polluted stormwater runoff contributes nutrients, sediment and coliform bacteria to the sub-region's tributaries and ultimately the Great South Bay. Vessel waste discharges and waterfowl are also contributors to the bacterial load." Recognize the role onsite septics play here, particularly in nutrient contributions. (The Nature Conservancy)

Response: Nutrient contributions from inadequate onsite systems are addressed in paragraph 5.

Comment #13: Page 4, paragraph 5: "…inadequate onsite wastewater disposal systems and other land-based sources." List these in order of contributing magnitude. (The Nature Conservancy)

Response: Comment noted.

Comment #14: Page 3: "Habitat loss and poor water quality have negatively impacted most of the estuarine species in the western bays, including horseshoe crabs…" Reference needed for identifying this impact on horseshoe crabs (HSC). HSC are doing as well as can be expected with limited loss of breeding sites identified in this area of Long Island by our CERCOM seasonal inventory. Actual references of those impacting HSC need to be provided. (CERCOM)

Response: Comment noted.

Comment #15: Page 4: "The Great South Bay is frequently impacted by brown tide during spring through fall because of excess nutrients entering the bay from fertilizer and inadequate onsite wastewater disposal systems." Brown tides have occurred infrequently and unpredictably over the last 8 years and have been blamed totally on non-point source nitrogen loading levels from septic systems, an unsubstantiated cause at any level. There is no definitive established scientific peer-reviewed literature or data supporting either of the causes noted here. Invalidated levels of suspected contamination from treated wastewaters (SPDES permitted sewage treatment plants) which may have influenced a periodic Brown Tide bloom condition which have been recorded last as a significant event, in 2013. However, even these natural events do not manifest themselves at the same concentration levels exhibited in "a toxic" bloom, when recreated in a laboratory under controlled conditions, or when observed in situ. Wastewater volumes being treated on Long Island have not changed over the time since 2013, thus no septic system has revealed an identifiable causative factor. (CERCOM)

Response: Refer to Suffolk County Department of Health Services, Final Subwatersheds Wastewater Plan Generic Environmental Impact Statement, February 2020. Responses to General Comment 21 and General Comment 25.

Comment #16: Page 5: "Nutrients primarily in ground water from inadequate onsite wastewater disposal systems '(I assume you are describing "septic systems")' have reduced fish survival in tributaries and led to harmful algal blooms including Brown Tide, Red Tide, and

Rust Tide outbreaks in the sub-region." Once again, an inappropriate diatribe blaming septic systems for all pollution events. Suffolk County Water Authority has found no nitrogen contamination in Suffolk County groundwaters in over 20 years. No fish kill event (generally an extremely rare event on coastal Long Island), has been definitely shown to be caused by nitrogen levels in estuarine waters, or by sewage treatment plant discharges (point-sources that are SPDES permitted and monitored by NYSDEC annually). And most clearly established in the scientific literature, there is no direct substantive causative effects resulting in Brown, Red, and Rust blooms at any time over the last 15 years. The closest Ride Tide (Gonyaulax sp., A dinroflagellate) event to Long Island which can lead to paralytic shellfish poisoning (PSP) if ingested, occurred in Florida in 2017. Long Island has no documented Red Tide occurring off the coast. Most of the Red Tide (dinoflagellate) blooms have occurred (Karaina brevia's); in winter, in Florida 2017 – 18. NYSDEC has found a measurable level up saxitoxin in the Huntington-Northport Bay system in 2012, 2016, and 2018, resulting in precautionary shellfishing in this harbor. The direct cause of this situation was never identified. (CERCOM)

Response: Refer to Suffolk County Department of Health Services, Final Subwatersheds Wastewater Plan Generic Environmental Impact Statement, February 2020. HABS – Responses to General Comment 21 and General Comment 25. There were 64 red tide blooms on Long Island between 2006 and 2016. Fish Kills – Response to General comment 19. Groundwater Quality – Response to General Comment 19 that includes a detailed summary of historical groundwater investigations. SCWA wells are extremely deep and do not represent the nature of the shallow groundwater that is discharging to the bays. Response to General Comment 32, top of page 2-110 that indicates >10 percent of the private supply wells sampled in Suffolk County exceed the State drinking water standard of 10mg/l. HABS – Response to Comment #16. The Suffolk County Department of Health Services (SCDHS) has documented brown tide blooms with concentrations >150,000 cells per milliliter, in the Reserve in 2018 and 2021. SCDHS has also documented brown tide blooms at concentrations over 20,000 cells per milliliter in the Reserve 32 of the last 37 years.

Chapter 2: Water Quality

Plastics and Marine Debris

Comment #17: Update plastic pollution section to reflect NYS law that bans plastic carry-out bags: On page 14 of the Draft CMP, the section entitled "Legislation to discourage plastics" does not include that on March 1, 2020, NY State's law to ban plastic carry out bags went into effect. Eliminating single use plastic bags is a major step to reducing polluting plastics in the Reserve. (Citizens Campaign for the Environment)

Response: Comment addressed on page 14 in "Legislation to Discourage Plastics" section.

Comment #18: Include additional recommendations to reduce plastic pollution: A priority moving forward should be working with local groups and policy makers to enact legislation banning the use of the most common single-use plastics found on our local beaches, including bags, EPS foam containers, straws, stirrers, utensils, balloons and other prolific plastic pollutants that can be effectively replaced by reusable or more readily recyclable options. These plastic bans greatly reduce the amount of plastic pollution entering our local bays and estuaries and have been proven effective at encouraging consumers to make the switch to more sustainable options and adopt Bring Your Own (BYO) behaviors. (Citizens Campaign for the Environment)

Response: Action 2.7.2 added under Outcome 2.7.

Comment #19: Implement create cradle to grave policies to reduce marine debris: Plastic packaging of consumer goods is excessive and often difficult to recycle. Unnecessary excessive packaging is contributing to New York's growing solid waste crisis and is significantly contributing to litter in our communities and in the Reserve. Currently, manufacturers bear no responsibility for disposing of packaging waste they create. To help address this problem, New York State should adopt an Extended Producer Responsibility (EPR) law for product packaging. An EPR law would require manufacturers to take responsibility for their products throughout their entire product life cycle, by bearing the cost of proper recycling and responsible disposal for packaging and printed paper. Not only does this provide relief to taxpayers, but it also serves as an incentive for producers to minimize packaging materials, improve recyclability, and reduce the toxicity of their products. (Citizens Campaign for the Environment)

Response: Action 2.7.3 added to address comment #19.

Comment #20: The "Marine Debris" subsection needs to note that storm surge generated debris, such as timber, docks, decks, fences, bulkheads, plastics, sewage, hazardous materials, oil and propane tanks can also damage habitat and private property, as well as endanger human health and safety, as witnessed in the aftermath of Superstorm Sandy. (Town of Southampton)

Response: Comment addressed in "Marine Debris" section on page 9.

Comment #21: Page 10: Regarding boat shrink wrap, we are supportive of the new projects in Hempstead and Huntington to provide opportunities for recycling. We think the CMP should encourage the development of a similar estuary-wide program to ensure the large amounts of plastic waste generated boat shrink wrapping is recycled. (Seatuck Environmental Association)

Response: Comment addressed with Action 2.7.3.

Comment #22: Page 10: It is important to note that derelict fishing gear becomes derelict not only through abandonment, but also by breaking loose in severe weather events. As it does for derelict boats (Action 2.7.6), the CMP should support state legislation to provide reliable funding so that the removal of gear can also be given the priority it deserves. A. 6294/S.1965 is one current legislative

effort in this regard. If enacted, it would require the DEC to develop an annual marine and coastal debris plan; passage would also increase the possibility of funding for efforts to remove derelict fishing gear. (Seatuck Environmental Association)

Response: Comment noted.

Comment #23: Page 14: The section titled "Legislation to Discourage Plastics" is missing some recent legislative efforts and would benefit from being made more current. (Seatuck Environmental Association)

Response: Comment addressed on page 14 in "Legislation to Discourage Plastics" section.

Comment #24: Page 26: We agree with the comments concerning fishing line, in Action 2.7.3; and have increasingly noticed fishing line recycling tubes have been installed at marinas across the estuary. We recommend that the SSER undertake a survey of municipal and private marinas to determine the adequacy of geographic coverage of these recycling tubes and, where gaps exist, urge that additional recycling tubes be installed. (Seatuck Environmental Association)

Response: Additional text included in Action 2.7.3 for conducting survey of fishing line recycling locations.

Boating

Comment #25: Page 15: The mobile vessel pump-out boat program in the Town of Southampton needs to be referenced by the "No Discharge Zone Designation" subsection. (Town of Southampton)

Response: Section recognizes that municipal programs are providing pump-out services.

Comment #26: Page 25: The "Best Management Practices for the Boating Community" need to be expanded upon to calls for the continued transition to four-stroke motors, hybrid propulsion engines, electric boat motors, solar powered boats and non-motorized boating, in the interest of reducing air, noise and water pollution. (Town of Southampton)

Response: Additional text added to Action 2.6.1.

Comment #27: Page 15: "No Discharge Zone Designation" paragraph; consider including an updated map of pump out stations and numbers for mobile pump out boats. (The Nature Conservancy)

Response: Action 2.6.2 addresses this comment calling for all mobile and land based pump out locations to be mapped.

Comment #28: Support municipalities land based and mobile pump-out boats: The draft CMP contains Action 2.6.2, "Identify all land based and mobile pump-out facilities throughout the Reserve." This action is needed to ensure there are enough facilities for boaters to safely pump-out waste and keep out waters clean. However, it is imperative that the SSER program continue to prioritize and

incentive municipalities to keep up their existing facilities. Mobile pump-out boats are convenient and easy for boaters to use. They are an important tool to keep boating waste out of the Reserve. (Citizens Campaign for the Environment)

Response: Action 2.6.3 added to Outcome 2.6.

Sewering/Septic

Comment #29: Sewer Point Look-out in the Town of Hempstead: Point-Look-out is the last Nassau County south shore community that is unsewered and relies on outdated and failing septic and cesspool systems. Nassau County is conducting a feasibility study to sewer Point Look-out and connect it to one of the existing Sewage Treatment Plants. This should be a priority for Reserve. (Citizens Campaign for the Environment)

Response: Text added to Action 2.1.3 to include Point Lookout (Nassau County).

Comment #30: Conduct a comprehensive sewage solution plan for Fire Island Communities: A USGS report found 80% of the septic effluent generated on Fire Island drains to the bay and not into the ocean. Fire Island presents unique challenges in treating wastewater. Suffolk County funded a study to develop a sewage solution plan for Fire Island communities. (Citizens Campaign for the Environment)

Response: Comment incorporated into Action 2.1.3.

Comment #31: Draft CMP does not mention the efforts of the Coalition for Fire Island Waste Water Solutions in the summary of Current Efforts (page 12). This coalition, comprised of local, county, state and federal government entities, including FIA, and funded through the Suffolk County Water Quality Protection and Restoration program, is in the process of evaluating the current on-site septic systems used on Fire Island. We are also investigating alternatives for upgrading and replacing current systems with more sustainable and efficient nitrogen removing technologies. (Fire Island Association)

Response: Added entry on page 15 "Coalition for Fire Island Wastewater Solutions".

Comment #32: Page 20: "Oakdale/Sayville area: Sewer lines should be expanded to the Sayville and Oakdale areas to allow the communities to hook up to the Southwest Sewer District and Bergen Point STP, thereby reducing the use of septic tanks and cesspools. Current plans include sewering the southeastern border of the Connetquot River, known as the Idle Hour area, as Phase 1A of the larger project. Construction is set to be complete by mid-2024." I believe that these circumstances have changed. (Town of Brookhaven)

Response: Text changed to reflect concern for Oakdale/Sayville area sewers.

Comment #33: Page 7-8" The "Nutrient Pollution" subsection needs to highlight that the Town of Southampton and Suffolk County have enacted legislation to reduce nutrient loading by requiring property owners to install nitrogen reducing innovative/alternative on-site wastewater treatment systems (I/A OWTS), where new construction or substantial expansion of existing homes is proposed. The Town of Southampton, Suffolk County and the State also provide rebates to encourage upgrades and installation of new denitrification units. (Town of Southampton)

Response: Additional text added on page 13 under "I/A OWTS Legislation".

Comment #34: The "Town of Brookhaven and Town of Southampton" paragraph on page 13 needs to note that 20% of Southampton's annual Community Preservation Funds (CPF) can be directed to other water quality improvement projects in addition to I/A OWTS installation, such as mobile vessel pump out operations, installation of green infrastructure for storm water management, and aquaculture initiatives. (Town of Southampton)

Response: Additional text added on page 13 under "I/A OWTS Legislation".

Comment #35: Page 8, paragraph 1: The Bay Park and Long Beach STPs are undergoing substantial upgrades that should be highlighted below with more detail on the status and goal of the project. (The Nature Conservancy)

Response: Projects are addressed in Actions 2.2.1 and 2.2.2.

Comment #36: Page 12, paragraph 1: "…The act also established a $75 million rebate program to incentivize septic system upgrades by homeowners and small business owners." Include an update on the number of systems installed. (The Nature Conservancy)

Response: Comment noted.

Comment #37: Page 13: "Town of Brookhaven and Town of Southampton" paragraph, Suffolk County has passed similar standards that need to be included. (The Nature Conservancy)

Response: Suffolk County legislation has been added identifying the change to the Suffolk County sanitary code.

Comment #38: Page 20: Action 2.2.1; this is in progress so consider providing an update on the expected completion dates, etc. (The Nature Conservancy)

Response: Start and completion dates for the project were added to Action 2.2.1.

Comment #39: Page 22: Action 2.3.6; is there a list of these projects or locations that can be included? If not, a first step would be to have such a list. There are a few potential funding streams that may be available soon. (The Nature Conservancy)

Response: Link to NY Rising Community Reconstruction Plans added to Action 2.3.6.

Comment #40: Page 23: Outcome 2.4; consider adding a recommendation for towns and villages to initiate planning for communities around zoning where the SC septic code has been acting as a defacto zoning code - and where changes to septic code and/or sewering would change the health code so it no longer acts as a zoning backstop. Many community members are anxious about septic upgrades and sewering based solely on concerns about how it will change zoning and ultimately community character. This could be remedied by towns and villages that should never really have been relying on health code for their zoning backstop in the first place. (The Nature Conservancy)

Response: Comment noted.

Comment #41: Page 29: Action 2.9.8: Sewering is only one part of the recharge equation, the other is withdrawal and how water is used. This will only provide useful information if it includes those two factors, thus could be made more accurate by reading "consider impacts of water withdrawals, water use, and sewer expansions on the recharge of glacial aquifers." (The Nature Conservancy)

Response: Text added to Action 2.9.8.

Comment #42: Page 7: "Onsite wastewater disposal systems (aka septic systems) are not designed to remove nutrients and are often in areas with shallow ground water." Septic systems are incredibly effective and there has been no detectable nitrogen in groundwater aquifers in Suffolk County for over 20 years. Gravity flow septic system wastewater treatment is the historic septic treatment for individual homes, and it functions effectively and efficiently when properly maintained. As a nonpoint source, the maintenance of this trued-and-true historic nutrient reduction sanitary engineering process, is totally dependent on a soil's removal efficiency. No electric power is necessary as it is a gravity-controlled system. (CERCOM)

Response: Refer to Suffolk County Department of Health Services, Final Subwatersheds Wastewater Plan Generic Environmental Impact Statement, February 2020. Groundwater quality – Response to General comment 19 that includes a detailed summary of historical groundwater investigations. SCWA wells are extremely deep and do not represent the nature of the shallow groundwater that is discharging to our bays. Also, refer to Response to General Comment 32, top of Page 2-110 which indicates >10 percent of the private supply wells sampled in Suffolk County exceed the State drinking water standard of 10 mg/l. Septic System performance – Response to General Comment 24.

Comment #43: Pages 12-13: The entire Long Island Nitrogen Action Plan and the Suffolk County Wastewater Plan have been developed on flawed assumptions about nitrogen identified in the limited scientific literature on this issue, and, in critical reviews by independent scientists, engineers, and conservation biologists (included with CERCOM's comments). This entire section of the Draft requires revision (see CERCOM enclosures). The Center for Clean Water Technology at Stony Brook University has not

fostered any substantive environmental reviews of critiques by an independent scientific group on this issue. It is highly recommended that the National Academy of Engineering Science of the NAS should be requested to conduct an independent review of the supposed advanced wastewater engineering technology advocated and promoted by SUNY Stony Brook University, so as to clarify the positive advancement of nutrient overload in estuarine waters of the Great South Bay ecosystem. (CERCOM)

Response: Comment noted.

Comment #44: Here we see the following statement: "Failed cesspools in coastal areas with high groundwater may also contribute to pathogen loads in select waters, although additional study is needed to verify this." This is a technically problematic statement. The first issue is the reference #16. This is given as "Direct Correspondence with Suffolk County". This does not appear to be a published paper, which makes accessing the document for clarification and confirmation impractical. When using unpublished documents, access to those documents should be made readily available. In all our reports, we provide links to references that are not published or readily available. In any event, Suffolk County appears to be speculating on pathogens entering "select waters". What is meant by select waters? Are they talking about groundwater, streams, bays, ponds; and which ones? They also mention "failed cesspools". What do they mean by "failed"? Are they only talking about "cesspools" in the pure sense of the word (leaching pool with no septic tank)? Most disturbing is the inference that pathogens from septic systems is a problem worthy of an "additional study". It has already been established that the County has not successfully sampled the effluent from any of the 360,000 existing septic systems in the County, but is now recommending a study for pathogens from these systems? The County should be aware that studies to date have linked the pathogens found in surface water to wildlife and runoff; not septic systems. In addition, decades of groundwater analysis has not revealed pathogens in groundwater. This statement in the SSER Plan should be removed. (Royal Reynolds)

Response: Refer to Suffolk County Department of Health Services, Final Subwatersheds Wastewater Plan Generic Environmental Impact Statement, February 2020. See response to Comment 18af on page 2-112.

Comment #45: Page 13: The SSER Plan references the Suffolk County SWP as follows: This plan is a guide for transitioning away from the historical use of cesspools and septic systems as wastewater management techniques and shifting to a use of Innovative/Alternative Onsite Wastewater Treatment Systems. The SWP provides recommendations to achieve nitrogen load reduction goals through wastewater management for the protection of Suffolk County's vital water resources. The failure of Suffolk County and its consultants to properly ascertain the treatment efficiencies of conventional septic systems throws the nitrogen modeling results of the SWP into question, since the nitrogen loads to the estuaries are dependent on using accurate nitrogen removal efficiencies (NRE) for the septic systems and subsequent nitrogen removal zones. As described in our 2021 report, the County and its consultants underestimated the nitrogen removal efficiencies, resulting in a doubling of the projected nitrogen loading from septic system wastewater to the estuaries. The previous nitrogen removal efficiencies, established by

Valiela et al. (1997), were radically changed and incorrectly incorporated into the SWP nitrogen modeling; without published peer review. It should be noted that the Comprehensive Water Supply Plan (2015), which the SSER Plan referenced, recognized the adequacy of the conventional septic systems to protect the water supply in conformance with the population density requirements of Article 6 of the Sanitary Code. The county changed this position in the SWP without justification. The County did not provide adequate peer reviewed data to substantiate the radical changes to the findings of Valiela et al. (1997), which was supposed to be the baseline for the SWP modelling. Table 1 summarizes a comparison of the SWP and Valiela et al. (1997) nitrogen removal assumptions as used in the SWP nitrogen model. Considering the strong evidence against the NRE assumptions used in the SWP, the findings of septic system wastewater loading to the estuaries should be considered invalid. The SSER Plan should not use the SWP as a reference to document nitrogen loading from septic system wastewater to the estuary; such references should be removed from the SSER Plan. (Royal Reynolds)

Response: Refer to Suffolk County Department of Health Services, Final Subwatersheds Wastewater Plan Generic Environmental Impact Statement, February 2020. See responses to General Comments 16, 17, and 24.

Comment #46: Page 13: Here we see the statement: Conventional septic systems and cesspools are not designed to remove nitrogen. This is a misleading statement. Conventional septic systems do remove nitrogen as well as many other contaminants. Through their design they are placed above saturated soils and into soils that are conducive to the growth of biomats (biozones), which are designed to remove nitrogen through several microbial and physical pathways. This process is discussed in detail in our report, An Independent Review of Nitrogen Removal Efficiencies, pages 19-25. Figure 1 depicts a typical septic system and a predicted pathway to nitrogen removal. This statement in the SSER Plan should be removed. (Royal Reynolds)

Response: Refer to Suffolk County Department of Health Services, Final Subwatersheds Wastewater Plan Generic Environmental Impact Statement, February 2020. See response to General Comment 24.

Comment #47: Page 7: Here we see a similar statement to that found on page 13 that OWTS are not designed to remove nutrients: “Onsite wastewater disposal systems are not designed to remove nutrients and are often in areas with shallow groundwater. Combined, these conditions allow nutrients to flow directly into the groundwater and surface water entering the estuary’s bays.” As already discussed, and demonstrated in Figure 1, properly designed septic systems do not “flow directly into groundwater and surface water”. The reference, #9, used to support this position was a 2006 study, The effects of rainfall on the distribution of inorganic nitrogen and phosphorus in Discovery Bay, Jamaica. A review of this study did not reveal any reference to wastewater disposal systems or the topic at hand. It appears that the authors were confused in using this study. It is recommended that they check the reference. In any event, the statement should be removed from the SSER Plan. (Royal Reynolds)

Response: Refer to Suffolk County Department of Health Services, Final Subwatersheds Wastewater Plan Generic Environmental Impact Statement, February 2020. See response to General Comment 24, page 2-87. No regional wastewater management jurisdiction that was surveyed permits the use of cesspools or leaching pools for the removal of nitrogen.

Comment #48: Page 19: Here the SSER Plan calls to "reduce nutrient loading to the reserve from inadequate onsite wastewater treatment systems" through "sewer district expansions". Historically, the strategy for saving the bays has been to reduce nitrogen loading. Recently, Suffolk County had conducted a campaign with the slogan "Nitrogen is Public Enemy #1. Nitrogen was blamed for fish kills, loss of shellfish, loss of wetlands, loss of resiliency (erosion) and harmful algae blooms. As we now know, this strategy is a failure. The entire watershed from the Queens border to Oakdale is sewered, removing all septic system discharge of nitrogen (DIN) from the equation. This did not resolve the perceived problems. In fact, following the completion of the Southwest Sewer District in 1981 the shellfish industry collapsed and the first Brown Tide was documented. Harmful algae blooms persist. Our 2019 report, A Review of the Draft Generic Environmental Impact Statement for the Suffolk County Subwatersheds Wastewater Plan discusses this in more detail. Sewering upsets the underflow into the bays and should be limited. The SSER Plan should take a firmer stand against sewering that does not recharge. The SSER Plan should deemphasize the need to reduce DIN from onsite septic systems and focus on the real problems. (Royal Reynolds)

Response: Refer to Suffolk County Department of Health Services, Final Subwatersheds Wastewater Plan Generic Environmental Impact Statement, February 2020. See Response to General Comment 21 and 22.

Comment #49: Page 23: In the following statement we see one of the most important challenges facing our water supply and estuaries; and yet it is given no urgency in the SSER Plan: "The extensive sewering in Nassau County and the discharge of STP effluent via an ocean outfall has lowered the water table and impacted important wetlands. Recommended sewer district expansions should consider impacts to the Glacial Aquifer in project development." The depletion of our groundwater water supply by sewering with ocean outfalls, which dumps tens of millions of gallons of treated water into coastal waters, is the most critical water problem facing Nassau County (and Suffolk is following close behind). We review this problem in our 2018 report, A Review of the 2017 LICAP report: "Groundwater Resources Management Plan" - as it relates to sewage disposal policies in Suffolk County, N.Y.,. Nassau County has exceeded its sustainable yield and shows no signs of resolving the problem. In our report, we give recommendations, which should be incorporated into the SSER Plan and enacted upon immediately. A firmer position on this in the SSER Plan is warranted. (Royal Reynolds)

Response: Comment noted.

Comment #50: Page 28: Here we see the SSER Plan reference the recommendations of the Stony Brook University Eastern Bays Project to reduce HABs. In 2018 we reviewed this project and prepared a report, Review of the 2016 Report: Long Island South Shore Estuary

Reserve Eastern Bays Project: Nitrogen Loading, Sources and Management Options – as it relates to sewage disposal policies in Suffolk County, N.Y. The review found deficiencies in the nitrogen removal efficiency assumptions used in the nitrogen modelling, which skewed the projected nitrogen loading from septic system wastewater to the estuaries. We gave recommendations. These recommendations should be incorporated into the SSER Plan. "Action 2.9.2: Implement recommendations of LINAP, the Suffolk County Harmful Algal Bloom Action Plan, and Stony Brook University's Eastern Bays Project to reduce HABs in the Reserve. The brown tide research conducted by Suffolk County must be continued in order to identify and implement successful prevention and mitigation measures." (Royal Reynolds)

Response: Comment noted.

Harmful Algal Blooms

Comment #51: Page 8: The entire Eutrophication section indicates "high nitrogen loading" and its long residence time in the reserve and identifies "seasonal hypoxia as a serious threat to aquatic life in the areas of map 6." There is no justification, or peer reviewed research results that support this statement. In fact, work at CERCOM monitoring Great South Bay for 20 years, reveal a robust oxygen (top and bottom bay waters) characterization with DO average values consistently above 8.07mg/L and 5.96 (ppm) in both surface and bottom waters respectively of Great South Bay. (The Coastal Monitor, CERCOM Newsletter enclosure provides DO Values for GBS). The 1970 Federal Clean Water Act and all its amendments characterized "clean waters of the United States" with dissolved oxygen levels at 5mg/L (ppm). The DO water quality of Great South Bay far exceeds this mandate. (CERCOM)

Response: Refer to Suffolk County Department of Health Services, Final Subwatersheds Wastewater Plan Generic Environmental Impact Statement, February 2020. See response to General Comment 19.

Comment #52: Page 9: Under the section "Harmful Algal Blooms," the statements regarding the impact of phytoplankton populations on Long Island's estuarine eco-system, is an exaggeration of the impact of periodic, (and quite harmless to human health) and natural seasonal phytoplankton blooms throughout the Great South Bay. Once again noting "Red Tide" blooms and blaming these unsubstantiated, non-existent circumstances on nitrogen loading, from septic systems (a nonpoint source of wastewaters) is unsubstantiated. Red Algae are not Red Tide organisms and should be properly identified. (CERCOM)

Response: Refer to Suffolk County Department of Health Services, Final Subwatersheds Wastewater Plan Generic Environmental Impact Statement, February 2020. See Response to General Comment 21 and General Comment 25.

Comment #53: Page 28: Survey of all Brown Tide research published to date, has produced no advances in establishing the ability to identify and implement successful prevention and mitigation measures for Brown Tide events. Brown Tides have been practically nonexistent, over the last three years during the COVID-19 pandemic when only one identified minor bloom event occurred. This marine alga

is part of the phytoplankton diversity normally found in our coastal waters. All phytoplankton will bloom invariably resulting in cases of minimal impact events, which have occurred for decades on Long Island and remain ephemeral and short term. These "outbreaks" are mostly an aesthetic issue, thus requesting any level of State or Federal funding for Brown Tide research (which is not a public health issue like a Red Tide outbreak) would be much better directed to a more significant coastal issue such as coastal erosion. In addition, as testimony to the wrongful conclusion of septic systems as a major cause of these environmental perturbations, the last three years of the global pandemic, where people were secluded in homes using septic systems to an unpirated scale, no "bloom" events outside normal, natural spring blooms, have occurred.

Response: Refer to Suffolk County Department of Health Services, Final Subwatersheds Wastewater Plan Generic Environmental Impact Statement, February 2020. See Response to General Comment 21 and General Comment 25.

Open Space/Land Preservation

Comment #54: Action 2.1.2: Page 19 needs to be rewritten to state that consideration should be given to drafting and adopting new state legislation establishing South Shore Estuary Reserve and Long Island Sound Region Community Preservation Funds to finance needed open space and water quality improvements, modeled after the Peconic Bay Region Community Preservation Fund. (Town of Southampton)

Response: Action 2.1.2 edited to reflect Comment #54.

Comment #55: Page 22: Mention needs to be made that Community Preservation Fund monies are being utilized by the Town of Southampton to acquire former duck farm properties, in the interest of fostering wetlands recovery and enhancing public access. (Town of Southampton)

Response: Text added to Action 2.3.8.

Comment #56: Regarding water quality, the value of acquiring lands in the coastal zone as a water quality and habitat protection strategy should be assessed. In this latter regard, the CMP mentions the work of Suffolk County in acquiring lands in the Mastic Marshlands area (Mastic-Shirley Conservation Area); the extensive acquisition effort of Brookhaven Town which has preserved dozens of parcels should be recognized. (Seatuck Environmental Association)

Response: Comment noted.

Wetlands

Comment #57: Page 42: The recommendations in support of wetland restoration need to be expanded upon to call for the development of model local legislation for increased wetland protection, as well as for the creation of an advisory committee to evaluate the effectiveness of New York State's tidal and freshwater wetland programs, with the goal of offering recommendations for needed changes and amendments, including, among others, greater permitting flexibility when reviewing and approving "Living Shoreline" projects, and providing the needed authority to condition state wetland permits for developed properties upon establishment of naturally vegetated wetlands buffers, inclusive of replacement of existing lawn and landscape with native vegetation. (Town of Southampton)

Response: The recommendations of the CMP are focused on restoration of wetlands. The CMP is not the appropriate method to call for review of regulatory programs.

Comment #58: Page 43: The implementation recommendations need to include establishment and/or amendment, as needed, of state and local wetland laws, to allow for conditioning of wetlands permits upon establishment of covenanted wetland preservation areas and naturally vegetated wetlands non-disturbance/non-fertilization buffers, prohibiting the application of fertilizers, herbicides, and pesticides, as well as the discharge of roof runoff or swimming pool discharge, within the restricted areas. (Town of Southampton)

Response: Tidal wetland permits for new development in adjacent areas generally do require a no-disturbance, non-fertilized vegetated buffer on the landward edge of the wetland boundary. Most sites that NYSDEC issues permits for are not large enough to make a required covenanted preservation area feasible. Drywells for roof runoff and pool discharges are also very standard conditions added to Tidal Wetland permits.

Comment #59: Page 44: The recommended amendment of applicable tidal wetland regulations could be further strengthened by calling for drafting of model wetland legislation, for use by local municipalities.

Response: Model legislation could be developed by the Reserve and NYSDOS if local municipalities were supportive of the development of the model legislation.

Comment #60: Page 44: Action 2.4.3; regulation of buffer areas should be expanded to encompass anticipated migration/expansion in response to climate change. (The Nature Conservancy)

Response: Text added to Action 2.4.3 to reflect comment #60.

Pesticides/Herbicides

Comment #61: In furtherance of the pesticide reduction goals, local municipalities should contact landowners and commercial pesticide applicators to discourage chemical use adjacent to wetlands and surface waters, when receiving notice of scheduled pesticide/herbicide use on waterfront parcels, adjacent to town owned open space and bay/creek/pond bottomlands, pursuant to neighbor notification laws. (Town of Southampton)

Response: Comment noted.

Comment #62: Public schools, libraries and recreational parks should be listed as further examples of public properties where fertilizer, pesticide and herbicide applications need to be prohibited and/or where more stringent BMPs need to be implemented. (Town of Southampton)

Response: Comment noted.

Stormwater/Water Use

Comment #63: Integration of a new "Action 2.9.10", is recommended, requiring the capture and recharge of stormwater runoff as a condition of all building permits for new home construction, as well as home expansion, through the installation of gutters, leaders and downspouts, which direct runoff into subsurface drainage structures. Where site conditions indicate there is shallow depth to ground water, alternatives such as shallow drainage chambers, French drains, or rain gardens need to be utilized. Pervious patios and driveways should likewise be encouraged in the interest of allowing for greater rainwater infiltration and abating storm water runoff. (Town of Southampton)

Response: Comment noted.

Comment #64: Page 29: Regarding Action 2.9.8, we agree that all new sewer projects should consider their impact on aquifer resources, but we urge that the CMP go a step further by recommending that all new sewer projects included offsetting aquifer recharge contributions through the implementation of water reuse projects. (Seatuck Environmental Association)

Response: Action 2.9.8 edited to reflect Comment #64.

Comment #65: Chapter 2 should include a discussion of the potential that water reuse strategies have to reduce nitrogen loadings to the Reserve. Seatuck has recently launched an effort to create a "Long Island Water Reuse Road Map and Action Plan" to identify and prioritize water reuse opportunities across Nassau and Suffolk Counties. As existing projects at the Riverhead Sewage Treatment Plant and the Bay Park Sewage Treatment Plant have demonstrated, water reuse has great potential to help Long Island address not only water quality problems, but also issues related to water quantity. Water reuse should be an important tool in the effort to address these challenges in the Reserve. (Seatuck Environmental Association)

Response: Action 2.9.8 addresses Comment #65 to address water reuse.

Water Impairments

Comment #66: Page 7, paragraph 2: "The most recent New York State Department of Environmental Conservation…" Consider including a map of impaired waterbodies to show the spatial distribution of the impairments. (The Nature Conservancy)

Response: A map showing the geo-locations of impaired waterbodies is not available from DEC

Comment #67: Page 9, Map 7: Could be updated to include information through 2021. TNC can help get a new map if it was requested. (The Nature Conservancy)

Response: Comment noted.

Comment #68: Page 9, paragraph 2: "Failed cesspools in coastal areas…although additional study is needed to verify this." USGS has a report ready for publication (within the next month) that will help clarify this. That report should be included in this section and added to the references. (The Nature Conservancy)

Response: Comment #68 addressed with response to Comment #64.

Shellfish

Comment #69: Page 9, paragraph 2: Map 8; DEC just updated the shellfish closure maps - make sure to use most recent maps and numbers, consider including link or referencing the DEC Shellfish mapper; https://www.arcgis.com/apps/webappviewer/index.html?id=d98abc91849f4ccf8c38dbb70f8a0042 (The Nature Conservancy)4

Response: Map 8 updated with current NYSDEC closure areas.

Diadromous Fish

Comment #70: Page 24/25: Action 2.4.5; "As recommended by the Seatuck Long Island Diadromous Fish Restoration Strategy…" I am supportive of calling out Seatuck for all their good work on this topic, and for leading the LIDFWG, but the way this is worded fails to fully acknowledge that there are a dozen or more groups and agencies that participate in the Long Island Diadromous Fish Group, and because of that, this recommendation has support of a lot more groups than Seatuck. As written it seems like the recommendation of a single group. (The Nature Conservancy)

Response: Additional text added to Action 2.4.5 to recognize members of the LI Diadromous Fish Working Group.

Comment #71: Page 47: Action 3.5.7 that addresses diadromous fish, the CMP would benefit from a specific recommended schedule regarding stream/river connectivity projects (fishway installation, dam removal or culvert improvements). We recommend that the CMP call for the initiation of at least two new connectivity projects annually in the Reserve. (Seatuck Environmental Association)

Response: Priority projects will be considered for funding as funding is available.

Comment #72: Page 25: Action 2.5.1; Identify who will be lead on all these steps. (The Nature Conservancy)

Response: A reference to the NYSDEC State Superfund Sites webpage was included to provide additional information on the process.

Chapter 3: Living Resources

Shellfish

Comment #73: Page 40: "Town of Islip Bay Bottom Leasing Program - The Town of Islip began a Bay Bottom Leasing Program in 2012 in which 100 acres of town-owned underwater lands within Great South Bay were made available to lease for aquaculture at 5-year intervals. Due to high interest in leasing of underwater lands, Islip hopes to expand their aquaculture program for oyster cultivation." The Town of Brookhaven also began a Bay Bottom Leasing Program in 2015 in which 40 acres of town-owned underwater lands within Great South Bay were made available to lease for aquaculture at 5-year intervals. Currently, six (6) oyster farms, varying in sizes from one to three acres are in operation. Six (6) additional oyster farms are currently in the permitting process. (Town of Brookhaven)

Response: New entry added on page 41 to highlight Town of Brookhaven bottom leasing program.

Comment #73: Page 46, the Town of Brookhaven is also involved aquaculture projects within the Great South Bay and operates the Mount Sinai Harbor Shellfish Hatchery. The Town of Brookhaven's Mariculture Facility grows approximately 1 .5 million oysters and over a million clams each year. Juvenile clams and oysters are purchased from local nurseries and grown in a land based upweller system, in which seawater is pumped passed the shellfish held in tanks. The shellfish feed on the algae in the water column. This system protects the shellfish from predators and allows them to grow faster than they would normally grow in the wild. A portion of the shellfish are reserved for the Town's not- for-profit partners, who also raise the oysters in cages and bags and place the oyster spat on protected plots to aid in water quality improvement and act as natural spawner sanctuaries. The Town of Brookhaven seeded the Great South Bay with approximately 805,000 clams and 80,000 oysters in 2021 while seeding the Moriches Bay with 24,000 oysters in 2021. (Town of Brookhaven)

Response: All SSER participating Towns were recognized in Action 3.5.1.

Comment #74: Page 46: Outcome 3.5, in the interest of enhancing shellfish populations, an action item needs to be added to "Outcome 3.5" on page 46, which seeks to foster public and private construction of oyster reefs, to address erosion issues, promote biodiversity, and encourage eco-tourism. Construction of oyster reefs will also improve water quality, as one acre of oyster reef can filter nutrient laden phytoplankton from the equivalent of 36 Olympic sized swimming pools per day. (Town of Southampton)

Response: Current monitoring of success rates of oyster reefs is in the early stages with no information on success rates. Any Oyster restoration projects that would be proposed for uncertified areas would need to be considered on a case-by-case basis. A successful oyster bed in uncertified waters even if the oysters are valuable as a seafood product would require looking at more law enforcement patrols to watch for poachers.

Comment #75: Page 46: Action 3.5.3, we support shellfish – and other – aquaculture within the Reserve to the extent it is, as the CCP states, "environmentally and socially compatible." We urge that efforts be commenced as soon as possible, in coordination with the various municipalities, to identify and map locations that meet this standard. As it expands, aquaculture will compete for limited suitable space with the needs of commercial and recreational interests, not to mention the requirements of the Reserve's natural resources. A comprehensive spatial planning effort will be necessary to manage these competing interests and ensure the estuary's ecological health. (Seatuck Environmental Association)

Response: Spatial planning would be the socially compatible aspect to identification of appropriate areas for aquaculture.

Comment #76: Outcome 3.5: We suggest the inclusion of an additional action item that seeks to expand the recovery of waste shells for use in shellfish restoration projects. Reef forming organisms such as oysters require existing shell material for growth and recruitment, but historic overfishing of shellfish has greatly reduced the availability of such shell substrate in the Reserve. In addition, the spat-on shellfish reef restoration process requires cured shell material. Half Shells for Habitat, the island-wide oyster shell recovery partnership, was established in 2018 to address this need. This program works with the towns of Hempstead, Islip and Brookhaven to recover waste shells from local restaurants. The program has already recovered over 70,000 pounds of shell with about 14,000 pounds returned to South Shore bays through projects such as Cornell Cooperative Extension's Moriches Bay Project, Shinnecock Bay Restoration Project (SHIRP)and the newly initiated Save the Great South Bay Oyster Restoration Project. Half Shells for Habitat, as a founding member of the New York alliance of shell collection (NYASC), operates in cooperation with other shell recovery programs in NYS. (Seatuck Environmental Association)

Response: Comment addressed in Action 3.5.1.

Comment #77: Page 46: Outcome 3.5; The SSER should engage with the development, and adopt the recommendations of the NY Shellfish Restoration Planning NYSRP. (The Nature Conservancy)

Response: The Long Island Shellfish Restoration Project was added to Action 3.5.1.

Comment #78: Page 46: "Action 3.5.1: Expand upon and support programs aimed at…" Strengthen this action- "Create funding opportunities for …" (The Nature Conservancy)

Response: Comment noted.

Comment #79: Page 47: "Action 3.5.2: Conduct a sub-region evaluation of shellfish stock enhancement efforts." Would this assessment lead to any sort of management changes? (The Nature Conservancy)

Response: The evaluation may be considered when making future management decisions.

Comment #80: Page 47: Action 3.5.3; "The Long Island Nitrogen Action Plan recommends that locations be selected where it would be suitable and beneficial to prioritize water quality rehabilitation for the benefit of shellfish aquaculture practices." This is a precarious approach being that these farmed animals are produced for consumption and the grower would need to market them as such, a challenging proposition in an area with the challenges we have on LI. Starting an aquaculture business in areas of borderline water quality is a risky and potentially bad business decision. These farms need to be looked at as a future opportunity that could be more available to the local economy as water quality improves. Not as a solution to the problem. (The Nature Conservancy)

Response: The reference to the Long Island Nitrogen Action Plan was removed from Action 3.5.3.

Comment #81: Page 47: Action 3.5.3; "The Nature Conservancy's hard clam sanctuaries in Great South Bay have shown promise but have so far not led to increased recruitment, as brown tide has been detrimental to juvenile shellfish and hindered population restoration." Underlying the importance of a continued focus on the improvement of the estuaries water quality. (The Nature Conservancy)

Response: Comment noted.

Comment #82: Page 48: Action 3.5.4; "Continued implementation of recommendations from Suffolk County's Hard Clam Restoration Working Group report." And participation in and adoption of the forthcoming NYSHRP. (The Nature Conservancy)

Response: Comment noted.

Comment #83: Page 48: "Action 3.5.5: Develop a forum that includes all partners involved in the Reserve shellfishery." Identify a lead on this or it won't happen. (The Nature Conservancy)

Response: Comment noted. Future SSER CMP Action Agenda will address specifics of lead for actions.

Comment #84: Page 48: “Action 3.5.6: Continue to explore the feasibility of using submerged aquatic vegetation and shellfish for natural water filtration and capture of pollutants.” These largely lost resources need to be capable of existing in the estuary before they can be expected to make an impact on our water quality. (The Nature Conservancy)

Response: The action is calling for looking at the feasibility of using the resources for water filtration and capture of pollutants.

Fish Passage

Comment #85: The Town of Brookhaven is currently moving forward with the Swan River Fish Passage which should begin construction within the next few weeks. A grant has been secured, an RFP issued, and an engineering company selected for the development of a Local Waterfront Revitalization Plan for the Town of Brookhaven. (Town of Brookhaven)

Response: Comment noted.

Comment #86: Action 3.5.7: Where fish passage is proposed, either through removal of barriers; installation of fish ladders, or retrofitting of other fish passage mechanisms, the CMP needs to call for ensuring that other species, such as river otter, are considered when designing passage mechanisms. (Town of Southampton)

Response: Additional text added to Action 3.5.7 to address comment.

Comment #87: Page 48: Action 3.5.7; “As recommended by the Seatuck Diadromous Fish Restoration Strategy,71 efforts to manage and restore these waterbodies should consider opportunities for removal of barriers to fish movement and re-establishment of natural riverine condition.” Consider adding "and supported by the LI Diadromous Fish Working Group." (The Nature Conservancy)

Response: Additional text added to Action 3.5.7 to address comment.

Comment #88: Page 49: Paragraph 1; “Alternatively, fish ladders respond quickly to large fish movements and allow fish to pass through.” Not sure fish ladders are appropriate for the locks, or will help with passing menhaden which has been an issue that currently requires manually opening and closing the locks to pass large aggregations of fish... (The Nature Conservancy)

Response: Sentence removed from Action 3.5.7 to address comment.

Wetlands/Shorelines

Comment #89: “Deterioration of Wetlands” Bayside tidal wetland deterioration and loss associated with the prevention of ocean beach/dune/barrier sediment supply, via wind-blown sand blocked/captured by ocean side sand/beach fence lines, needs to better studied, understood and addressed. (Town of Southampton)

Response: This topic can be considered under Action 3.1.2 and can be specifically identified in the SSER CMP Action Agenda.

Comment #90: Page 37 of the CMP needs to acknowledge that stands of phragmites can provide valued ecosystem benefits such as, entrapment, filtration, uptake and breakdown of contaminants; shoreline stabilization and erosion control; shelter, travel corridors, nest/den, thermal and escape cover for wildlife, screening of human activities such as noise and visual disturbance; and buffering of residentially developed areas from storm surges and waves. Additionally, there needs to be mention that recovery of muskrat (Ondatra zibethicus) populations may be critical to management of phragmites, as they feed on shoots and rhizomes and use mature culms for lodge construction. (Town of Southampton)

Response: See Action 3.7.2 "Research the potentially beneficial role that Phragmites may play with respect to coastal resiliency, habitat, and water quality value".

Comment #91: Page 39: Needs to mention that the Town of Southampton, through its Community Preservation Fund, is reclaiming wetlands and wetland buffers through active acquisition of wetland and waterfront sites, followed by removal of bulkheads and other shore hardening structures, as well as docks, invasive vegetation and residential/commercial improvements. (Town of Southampton)

Response: Additional text added to include T. Southampton information on page 41.

Comment #92: Page 39: Needs to note that the Town of Southampton and the US Army Corps of Engineers are working to remove the existing gabions on the bayside of Dune Road, in Tiana, within Shinnecock Bay, as part of the Fire Island to Montauk Point Reformulation Plan (FIMP) Coastal Process Features requirements. (Town of Southampton)

Response: Comment noted.

Comment #93: In order to implement Action 3.1.1, the NYSDEC needs to enact more stringent regulations, which permit shoreline armoring only as a last resort when no environmentally less damaging practicable alternatives exist. This action also needs to call for the removal of existing bulkheads and shore armoring, wherever practicable, in the interest of fostering natural shoreline restoration and recovery. (Town of Southampton)

Response: Additional text added in Action 3.1.1 to address comment.

Comment #93: Page 44: Action 3.1.4 Should note that state and local laws need to be amended to require establishment and reclamation of naturally vegetated wetlands non-disturbance/non-fertilization buffers, as conditions of wetlands permits for new construction, both at developed and underdeveloped properties, as well as to prohibit fill deposition in flood zones for any reason other than septic system installation or upgrade, as such practice displaces floodwaters, interferes with natural flooding and drainage patterns, inhibits needed landward migration of tidal wetlands, and increases contaminant laden runoff. (Town of Southampton)

Response: Additional language added to Action 3.1.4 to address comment.

Comment #94: Page 33: “Deterioration of Wetlands;” Newly recognized traces of agricultural manipulations including embankments predate the mosquito ditching. See Adamowicz 2020 for details: Adamowicz, S. C., G. Wilson, D. M. Burdick, W. Ferguson, and R. Hopping. “Farmers in the Marsh: Lessons from History and Case Studies for the Future.” *Wetl Sci Pract* 37, no. 3 (2020): 182–95. (The Nature Conservancy)

Response: Comment noted.

Comment #95: Page 39: Paragraph 5; “Recent saltmarsh development and active restoration work is being conducted by the Suffolk County Division of Vector Control on both NYSDEC-owned and Suffolk County-owned parcels in Gardiners County Park, Timber Point, and Smith Point to name a few. The Suffolk County Division of Vector Control is currently researching dead pannes in Sheeps Pen Creek.” Delete this text and replace with this updated description: "Suffolk County Department of Economic Development and Planning, Suffolk County Parks, and Suffolk County Vector Control in NY received a U.S. Department of the Interior (DOI) Hurricane Sandy Coastal Resiliency Competitive Grant administered by the National Fish and Wildlife Foundation (NFWF) to implement Integrated Marsh Management (IMM) as described in Rochlin et al. (2012) on four sites within the SSER: Suffolk County Gardiner Park West (71 acres), Suffolk County Gardiner Park East (26 acres), West Sayville Marsh (113 acres), and Timber Point Marsh (51 acres). In addition to the on the ground restoration, Suffolk County’s project included a learning exchange among salt marsh restoration experts from across the Sandy-impacted region (from VA-ME) (Maher 2018). This learning exchange, assembled and led by The Nature Conservancy in NY (TNC), was called the Regional Technical Workgroup (RTW). The RTW was a forum for practitioners to discuss the best available restoration methods and share lessons learned to improve the success of coastal wetland restoration projects both within Suffolk County and across the larger region (Maher Salazar and Fournier 2021)." References for this: 1) Maher NP (2018) Saltmarsh Restoration Regional Technical Workgroup (RTW): Final Report. Submitted to Suffolk County Dept. Economic Development and Planning in support of Suffolk County’s National Fish and Wildlife Foundation (“NFWF”) Sandy resiliency grant: Coastal Resiliency via Integrated Wetland Management 22p; 2) Maher, N., Salazar, C. & Fournier, A. Advancing salt marsh restoration for coastal resilience: a learning exchange. Wetlands Ecol Manage (2021). https://doi.org/10.1007/s11273-021-09841-5; 3) Rochlin I, James-Pirri MJ, Adamowicz SC, Wolfe RJ, Capotosto P, Dempsey ME, Iwanejko T, Ninivaggi DV (2012) Integrated Marsh Management (IMM): a new perspective on mosquito control and best management practices for salt marsh restoration. Wetlands Ecology and Management 20:219-232. https://doi.org/10.1007/s11273-012-9251-9 (The Nature Conservancy)

Response: Recommended language inserted on page 39 with references.

Comment #96: Page 39: Paragraph 5; “Additional work has been done at Wertheim National Wildlife Refuge and through a series of post-Superstorm Sandy projects that are underway or planned across the Reserve.” Please include these short project descriptions that The Nature Conservancy’s has recently completed. Road-Stream Crossing Assessment and Inventory that was recently completed: A mapping and condition assessment of road-stream crossings was completed for Suffolk County in 2021. Stakeholders including local and State highway departments, natural resource managers, and NGOs contributed to a prioritization model for the crossings and interactive web map. This prioritization identifies the structures with the greatest potential for improved public safety, ecological function, climate resilience, and reduced flooding when they are upgraded to be right-sized to pass current and future water flows. Long-term Marsh Monitoring Marsh surface elevations are found to be a critical element of their long-term sustainability. While marsh systems can adapt to sea level changes through either horizontal or vertical growth their fate under current accelerated sea level rise rates is less certain. Since 2011 The Nature Conservancy has been maintaining a series of long-term elevation stations that have helped us better understand the processes that are currently impacting the growth, and therefore sustainability of our marshes within the Reserve. Note that there are other researchers (NPS and USFWS) that are also monitoring marshes using the same methods. As part of this effort The Nature Conservancy, working with partners at Florida International University and Northwell Health, collected samples to act as a baseline measure of marsh plant morphology prior to the dramatic water quality improvements that will come from the Bay Park and Long Beach STP upgrades and consolidation projects. (The Nature Conservancy)

Response: Recommended text added to “Wetland Restoration” section.

Comment #97: Page 42: Action 3.1.1, paragraph 2; I don't think that high marsh has "tremendous flood absorption capabilities", however it should be protected and enhanced for the other reasons given. In addition to biodiversity, could also list critical wildlife habitat, specifically for obligate salt marsh nesting birds. (The Nature Conservancy)

Response: Comment noted.

Comment #98: Page 43: Action 3.1.2, paragraph 2; Tidal wetland maps should be updated and include marsh migration pathways based on current sea level rise projections. Regulations should be put in place to prevent further development in these pathways. (The Nature Conservancy)

Response: See paragraph 1 “Identifying parcels and acting to secure available low-lying land, and plan for the landward migration of salt marshes is critical”

Comment #99: It should be noted that Suffolk County had a Wetland Management plan Ad Hoc Review Group and Suffolk County Department of Ecology received EBM guidance as well as mosquito management proposals in response to the presence of the West Nile Virus. Both committees had been discontinued in 2015. This unfortunate ban had eliminated the diverse scientific group of scientist and

ecologist that were (pro bono) developing plans to assist Suffolk County, to handle these complex ecosystem management activities. These Ad Hoc Support groups with ONLY volunteer scientists working on such plans, should be re-adopted by NYSDOS for the SSER and independently establish them to provide appropriate guidance in these two continuing and perplexing LI environmental issue. The present SSER TAC, which contains mostly nonscientists, cannot accomplish the preparation of the diversity of scientific plans necessary to progress in these areas. (CERCOM)

Response: Comment noted.

Eelgrass

Comment #100: Page 44: Action 3.2.1; Append or list the actions here generated by the SSER TAC SAV Working Group. (The Nature Conservancy)

Response: Reference to the Long Island South Shore Estuary Reserve Seagrass Action Plan included in Action 3.2.1.

Comment #101: While eelgrass loss is spoken to at great length on pages 34-35, mention of widgeon grass (Ruppia maritima), and its value as habitat for micro and macro invertebrates, inclusive of bay scallops, and as food for Atlantic brant and other waterfowl, is absent from this section. Accordingly, the plan needs to call for the mapping of widgeon grass occurrences and fostering of research into site specific habitat needs for this seagrass species. Study is also needed with respect to widgeon grass resiliency and adaptation to climate change and associated warmer waters and rising sea levels. (Town of Southampton)

Response: Text including widgeon grass added to the sections "Deterioration of Seagrass" and "SAV Mapping in the Reserve".

Comment #102: Page 44: Outcome 3.2 needs to acknowledge the existence of widgeon grass data gaps and pursue funding for research into population abundance, habitat needs, viability and climate resiliency. (Town of Southampton)

Response: The CMP is focused on addressing all seagrass in the Reserve including Widgeon Grass.

Comment #103: As the full extent of widgeon grass populations is unknown, the Comprehensive Management Plan (CMP) needs to call for the formation of a partnership with the Peconic Estuary Partnership, Long Island Sound Study and the New York Seagrass Task Force, in order to coordinate research on a regional level. (Town of Southampton)

Response: The CMP is focused on addressing all seagrass in the Reserve including Widgeon Grass.

Comment #104: Action 3.8.5: Maintain Regular Inventory of Eelgrass Distribution and Identify, Conserve and Monitor Key Locations: Occurrences, as well as habitat protection and recovery needs, for other aquatic vegetation, such widgeon grass, need to be addressed. (Town of Southampton)

Response: The CMP is focused on addressing all seagrass in the Reserve including Widgeon Grass.

Comment #105: Page 44: Outcome 3, the recommendations contained on page 44 need to be expanded upon to include an action to evaluate the use of marine sanctuary designations as a means of prohibiting activities that adversely impact seagrass, as well as to foster environmentally friendly eco-tourism ventures in designated zones. (Town of Southampton)

Response: Action 3.2.2 added to Outcome 3.2 to address comment #105.

Comment #106: Page 34: "Deterioration of Seagrass;" It would be helpful to include a map illustrating the change in eelgrass distribution from 2002 to 2018 (e.g. showing area gains in green, areas of loss in red, and areas with no change in yellow). Maximize the size of the maps (e.g. full page maps, or at least maximized to the page width) to improve the resolution. The current size is too small to discern much. (The Nature Conservancy)

Response: Comment noted.

Comment #107: Page 34: "Deterioration of Seagrass;" …approximately 10,000 acres." Is it possible to report the actual, rather than approximate, acreage of eelgrass extent in 2002 and 2018? This would be useful for comparison with eelgrass extent in other New York waters. (The Nature Conservancy)

Response: Actual acreage included to address Comment #107. 2018: 10,474 acres; 2002: 19,423 acres.

Comment #108: Page 34: Replace the actual map in Map 9 with the 2002 extent. Currently it shows the 2018 extent (same as map 10). (The Nature Conservancy)

Response: New map was inserted to reflect the extent of seagrass coverage in 2002.

Comment #109: Page 34: "…Seagrass is being impacted by respiratory stress…" The decline of seagrasses due to physical disturbances such as boat anchoring, propeller scars, benthic fishing gear and methods (e.g. traps, trawling), dredging, and coastal structures (e.g. docks, seawalls, groins) is well documented in the literature and should also be noted in this section. (The Nature Conservancy)

Response: Additional text was added to the section "Deterioration of Seagrass"

Comment #110: Page 34: "……eutrophic algal blooms and warming temperatures." Consider adding a citation to support this, such as: Short, F. T., Klein, A.S., Burdick, D.M., Moore, G.E. 2012. The Eelgrass Resource of Southern New England and New York: Science in Support of Management and Restoration Success (Phase I). Available at: http://nature.org/seagrassresearch. (The Nature Conservancy)

Response: Suggested reference added to section "Deterioration of Seagrass".

Comment #111: Page 34: “Spans of temperatures above 77 degrees Fahrenheit lasting a few weeks are considered detrimental to eelgrass health. Shorter periods of time above 80.6 degrees Fahrenheit contribute to mortality.” What are actual upper water temp ranges in the SSER derived from temperature loggers? Can any trends be reported here to support the need for enhanced action to conserve the remaining eelgrass meadows? (The Nature Conservancy)

Response: The temperatures identified are based on the understood temperature range that seagrass can survive. No temperature loggers have been deployed to support actual temperature range in the Reserve for seagrass survival.

Comment #112: Page 40: Paragraph 2; “The NYS Seagrass Coordinator at NYSDEC along with municipalities and stakeholders will develop conservation planning efforts for seagrass across coastal waters and the bays within the Reserve.” Additional context is needed here considering it has been 10 years since the SPA was enacted. Suggested additional context: While this was the intent, it never happened, and with the subsequent absence of a seagrass coordinator and dedicated funding to implement the SPA, it is not happening. At the same time, NYSDEC has proposed that local communities and municipalities should take the lead on seagrass conservation planning. With support from NGO’s such as The Nature Conservancy, some communities and municipalities, such as the Fishers Island Seagrass Management Coalition and the Town of Southold, have made significant progress in local seagrass conservation and management planning, and may serve as a model for other communities and towns. (The Nature Conservancy)

Response: Comment noted.

Comment #113: Page 44: Action 3.2.1; Append or list the actions here generated by the SSER TAC SAV Working Group. (The Nature Conservancy)

Response: Reserve TAC Seagrass sub-committee reference added to Action 3.2.1.

Comment #114: Page 52: Action 3.8.5; “The inventory of eelgrass distribution should be regularly updated.” And, at least periodically, coordinated with the timing and methods used to survey eelgrass in Long Island Sound and the Peconic Bays. (The Nature Conservancy)

- “Benthic mapping from aerial imagery and surface level verification…” Add and/or other emerging technology and methodology.
- “…along with research on carbon storage capacity provided by seagrass beds.” Add research “and carbon sequestration”

Response: Recommended text added to Action 3.8.5.

Comment #115: Page 53: Action 3.9.1; there will soon be an OA taskforce report. Perhaps reference that report which will have findings and recommendations (we think). (The Nature Conservancy)

Response: Comment noted.

Streams

Comment #116: Page 45: Action 3.2.2 needs to be expanded to note that any "hydromodification" of streams, culverts, dams, etc., needs to be designed and constructed to accommodate all wildlife species likely to utilize the stream and associated wetlands. Specifically, the CMP needs to indicate that where culvert modification is undertaken, such structures will be sized to accommodate river otter (Lontra canadensis), which have returned to Long Island and are expanding their range from the Long Island Sound and Peconic Estuary to areas of the SSER. (Town of Southampton)

Response: Comment addressed in Action 3.3.2.

Comment #117: Page 44: Outcome 3.3; Insert Action 3.3.4: Actively replace and right-size priority road stream crossings. Make reference to TNC road-stream assessment project. (The Nature Conservancy)

Response: Action 3.3.4 added to address comment #117.

Comment #118: Page 49: Paragraph 3; "…natural hydrological flow, warm stagnating impounded waters and reduced connectivity to estuary and the ocean." And maintaining the dams for safety etc. (The Nature Conservancy)

Response: Dam maintenance was added to page 49, paragraph 3 to address comment #118.

Wildlife (Birds/Turtles/Finfish)

Comment #119: Outcome 3.4: The implementation action needs to acknowledge that unregulated/unrestricted use of drones may be adversely impacting nesting shorebirds and other coastal birds and speak to the need for further study and regulation of such uses. (Town of Southampton)

Response: Additional text added to Action 3.4.1.

Comment #120: Action 3.6.1: Develop a Habitat Conservation Plan in the Reserve for Diamondback Terrapin: It should be noted on pages 48-49 that diamondback terrapin (Malaclemys terrapin) are the world's only turtle to exclusively inhabit brackish waters. Although the NYSDEC recently ended centuries of commercial harvest of diamondback terrapin in 2018, additional conservation measures are needed. In order to fully understand the existing threats to terrapin populations, the action item needs to foster research for the purposes of completing a population and habitat needs assessment. Additionally, the recommended habitat conservation plan needs to call for the seasonal closing of vehicular dirt roads, which extending into the marshes along Dune Road, during

diamondback terrapin nesting season, to prevent vehicular compaction and destruction of nests, as well as mortality of adults and hatchlings. (Town of Southampton)

Response: Comment noted.

Comment #121: Apart from their commercial or monetary value, the CMP needs to acknowledge the intrinsic value of finfish, in terms of broader ecosystem health, integrity and biodiversity, when discussing the decline of finfish populations. These intrinsic values include their right to live devoid of any human consumptive values and their essential role in ecological food webs. The benefits of healthy diverse fish populations, with regards to enhanced visual based recreational opportunities, such as scuba diving, snorkeling and underwater photography, should also be acknowledged. (Town of Southampton)

Response: Comment noted

Comment #122: The CMP needs to note that apex finfish, such as sandbar, sand tiger and dusky shark populations are declining and vulnerable to extirpation, and thus call for further research and actions to aid in recovery of these species. (Town of Southampton)

Response: Action 3.5.10 added to address comment #122.

Comment #123: Action 3.6.5: Provide communication and coordination with public utilities when osprey nests are sited on power lines and utility poles: Page 49 needs to note that where no suitable alternative osprey nest site exists, existing nests will be placed atop a platform after chicks have fledged and prior to the next nesting season. Additionally, the "Action" needs to be expanded to require seasonal removal of duck blinds, as osprey nests atop such structures are highly vulnerable to predation. (Town of Southampton)

Response: Additional text added to Action 3.6.5 to address comment #123.

Comment #124: Outcome 3.6: Improve Management of State and Federally Regulated and Regionally Important Species: An additional action item is needed, calling for development of habitat recovery plans and a wildlife monitoring network for other regionally important wildlife species, including, among others, species of greatest conservation need. Northern harrier (Circus cyaneus), bald eagle (Haliaeetus leucocephalus), salt marsh sparrow (Ammodramus maritimus), short-eared owl (Asio flammeus), Atlantic brant, black duck (Anas rubripes), yellow rail (Coturnic0ps noveboracensis), eastern black rail (Laterallus jamaicensis), red phalarope (Phalaropus lobatus), river otter, muskrat and mink (Neovision vison) are some of the more notable species that have declining populations and which need to be better researched and addressed. (Town of Southampton)

Response: Action 3.6.8 added to Outcome 3.6 to address comment #124.

Comment #125: We encourage the CMP to elaborate on the "Outcome 3.4: Improve Habitat Connectivity for Coastal Birds" by specifically identifying, perhaps in the Appendices, of all the known tern, gull, and wading bird colonies existing in the SSER and to recommend an estuary-wide management and protection plan for these species. This plan should include restoration of bay islands which either currently provide or historically provided nesting habitat and should assess the merits of thin layer deposition of dredge material to create habitat and to help tidal marshes respond to sea level rise. (Seatuck Environmental Association)

Response: Comment noted.

Comment #126: Page 48: Discussion of developing a habitat conservation plan for diamondback terrapins. The CMP should also recommend specific strategies to protect terrapins from the numerous threats they face. These strategies could include modification and/or removal of bulkheads to facilitate terrapin access, erection of barriers to prevent egg-laying female terrapins from accessing dangerous roadways and the related placement of terrapin gardens, and signage to make the boating public more aware of the presence of terrapins in estuary waters. (Seatuck Environmental Association)

Response: Additional text added to Action 3.6.1 to address comment #126.

Comment #127: Page 37: Paragraph 1; “Most notably, the diamondback terrapin is threatened by habitat loss from coastal development, predation, overharvest, crab pots, ghost fishing, recreational boating and sea level rise.” The sequence of these threats would be better in order. Perhaps, loss of habitat, shoreline armoring (that prevent access to habitat), bycatch in crab traps.... made worse by SLR, and the situation set up by historic harvesting. Could double check order by reaching out to Dr Russ Burke at Hofstra. (The Nature Conservancy)

Response: Comment noted.

Comment #128: Page 37: Paragraph 1; “Terrapins are still listed as a protected game species.” Double check this. NYS ended all terrapin harvesting about 3 years ago, and that likely changes its classification as a "game species". (The Nature Conservancy)

Response: Text was corrected to reflect the law banning terrapin harvesting that went into effect on May 1, 2018. Language also added on page 42 identifying law to end terrapin harvesting.

Comment #129: Page 37: Paragraph 5; “Some of the species impacting the Reserve include: Conch, Chinese Mitten Crabs and Asian Clams.” Do we have all these invasive species in the reserve? We certainly have others including invasive tunicates, invasive macro algae, and Asian shore crabs - perhaps use those unless there is confidence we have these others? (The Nature Conservancy)

Response: Recommended text added on page 38, section on “Invasive Species”.

Human Impact

Comment #130: Outcome 3.6: A further action item is needed, calling for commencement of pilot research projects to evaluate the impacts of beach driving on wildlife, marine life, rare plants, beaches and dunes, by establishing and monitoring designated open and closed beach vehicular use zones, and comparing field observations, scientific control measurements and other data. (Town of Southampton)

Response: Action 3.6.10 added to Outcome 3.6.

Comment #131: The CMP needs to call for the adoption of local laws which limit and require permitting of any clearing, grading, tree cutting and/or site disturbance, in excess of defined thresholds (square footage or percent of lot area), within the SSER watershed. Protection of natural vegetation is essential in order to prevent surface and ground water degradation, to sequester carbon, to maintain air quality.to sustain biodiversity, to protect wildlife habitat, and to maintain property values and quality of life. (Town of Southampton)

Response: Comment noted.

Comment #132: Page 33: Important to also note the detrimental impacts boats and personal watercrafts (PWCs) have on tidal wetlands and wildlife. The wakes caused by high speeds contribute to erosion of marsh edges and overall marsh loss. This is especially true for PWCs because their shallow draft allows them access to almost all parts of the South Shore bays, including in and around vulnerable marsh islands. We recommend that any and all measures are considered to ensure boaters adhere to speed restrictions, especially near marsh islands. In an effort to educate boaters about why speed restrictions are important, we suggest that the phrase "Help Prevent Wetland Erosion" or some similar saying be added to new navigation signs to make it clear why the restrictions exist. (Seatuck Environmental Association)

Response: Comment noted.

Comment #133: Page 35: Paragraph 3; “For example, the shift in spatial prevalence from blue crabs to the saline tolerant lady crab exemplifies species-based change resulting from shifting ecosystem conditions. However, more research is needed to better understand this relationship.” It’s helpful to recognize that this was driven by a natural process and that in the long-term the ecological community will be more resilient and diverse by allowing those processes to occur. (The Nature Conservancy)

Response: Language edited on page 35 paragraph 3 to reflect comment #133.

Comment #134: Page 49: “Action 3.5.8: Encourage and incentivize the use of circle hooks over J hooks for fishing.” How? (The Nature Conservancy)

Response: Additional details to be laid out in separate SSER Action Agenda.

Comment #135: Page 52: Paragraph 1; "To sustain both fishery products and the bayman lifestyle consistent with existing Federal regulation…" Guessing this is in reference to MSA national standard 8, but its oddly written - sustaining baymen lifestyle is not a federal regulation. (The Nature Conservancy)

Response: Comment noted.

Comment #136: Page 33: In this statement we see septic systems linked to loss of tidal wetlands. No peer reviewed studies have shown cause and effect between septic system nitrogen (DIN) and wetlands loss. Reference to septic systems causing wetlands loss should be removed from the SSER Plan. Current losses of tidal wetlands stem from activities related to sediment disruption from shoreline hardening structures such as bulkheads; subsidence; wave energy; erosion; historical mosquito ditching by vector control; dredging; inlet and barrier island stabilization; sea level rise;45 excess nitrogen input from septic systems, sewage outflows, fertilizers and atmospheric deposition. Excess nitrogen combined with greater inundation can significantly impact wetlands. Leaching of toxic wood preservatives used on treated lumber may also impact tidal wetland health. (Royal Reynolds)

Response: Refer to Suffolk County Department of Health Services, Final Subwatersheds Wastewater Plan Generic Environmental Impact Statement, February 2020. See responses to General Comment 19 (starting on page 2-67).

Citizen Science

Comment #137: Action 3.8.1: Conduct Research, Monitoring, Modeling and assessments in Support of Living Resources Objectives: In furtherance of this Action, the Department of State should coordinate with the Peconic Estuary Partnership, Seatuck Environmental Associates, and other research institutions for the purposes of establishing a centralized data base and agreed upon standardized methodology and protocols for citizen scientists to report their findings. (Town of Southampton)

Response: Action 7.4.3 added to Outcome 7.4.

Invasive Species

Comment #138: Page 37: In section 3.3.7, the examples of invasive species impacting the Reserve could benefit from the inclusion of the non-native tunicates and other fouling organisms that will be an increasing problem in South Shore waterways. (Seatuck Environmental Association)

Response: Comment #138 addressed in "Invasive Species" section on page 38.

Horseshoe Crabs

Comment #139: Page 35: Rightly identifies horseshoe crab as an ecologically important keystone species, which are commercially harvested for bait. While it is estimated that 150,000 horseshoe crabs are being harvested from Long Island waters annually, the Town believes this is an under-count of the actual harvest. Accordingly, the CMP needs to call for official harvest counts, rather than self-reported estimates, as well as the lowering of catch limits. Rigorous scientific and statistical methodology need to be established for accurately assessing population data and trends. Serious consideration needs to be given on imposing a horseshoe crab harvest ban or moratorium similar to that enacted by New Jersey. (Town of Southampton)

Response: Horseshoe crabs are managed coastwide through the Atlantic States Marine Fisheries Commission (ASMFC). New York submits annual compliance reports to ASMFC. In addition, ASMFC conducts stock assessments generally every 5 years to determine stock status. The 2019 stock assessment determined that the New York Region stock (NY and CT) was in poor status. As a result, NYSDEC implemented the 5-day lunar closures around peak spawning and decreased the daily trip limit from 200 crabs to 150 crabs during the spawning season. New York currently manages under an annual voluntary quota of 150,000 crabs. Over the past two years (since the lunar closures haven been implemented) we have seen the harvest numbers closer to 100,000 annually. CT has implemented similar regulations and ASMFC will continue to monitor the New York Region stock status. Imposing a horseshoe crab moratorium but keeping the eel and whelk fisheries open could push the harvest pressure to a new area and possibly cause a collapse in that population. A moratorium may also increase the likelihood of poaching.

Comment #140: Page 35: Paragraph 4; "Further research is needed with respect to the impacts of overharvest on the sustainability of horseshoe crab populations to assist with development of a regional horseshoe crab population and management plan." Research and monitoring with respects to the impacts of harvesting and the sustainability of HSC.... the goal should be to not have overharvesting and so we shouldn't be studying overharvesting, we should be ending it - a simple word change could help here. (The Nature Conservancy)

Response: Addressing Comment #140 "Overharvest" was replaced with "Harvest" on page 45 under "Habitat Degradation and Population Decline of Horseshoe Crabs".

Comment #141: Page 35: Notes a few lines on Horseshoe Crabs with only a NYSDEC HSC pamphlet as a reference document. This total omission of the CERCOM/Molloy College 20-year HSC monitoring program is unfathomable. CERCOM/Molloy College has provided the annual Horseshoe Crab Inventory reports to the NYSDOS over this time. CERCOM has provided all reports data and several PowerPoint presentations on horseshoe crabs to a host of SSER constituents for reference and filing purposes, to be used in the upgrading of the final management report. CERCOM is the only field laboratory of any academic institution whose sole purpose is to captive breed Horseshoe Crabs. It is the only such laboratory in the Western Hemisphere. Dr. Tanacredi is the inaugural Steering Committee member of the IUCN SSG for Horseshoe crabs. Dr. Tanacredi is a global authority on the conservation and

biology of horseshoe crabs and has three authoritative books on horseshoe crabs which include six reference manuscripts covering all monitoring done on Long Island with several location sites in the Great South Bay. (CERCOM)

Response: Comment noted.

Comment #142: Page 42: Totally omits CERCOM's 20-year monitoring program in Great South Bay for Horseshoe Crabs. No mention of the USGS research gaps report prepared in 2017 that identified Molloy College CERCOM along with over 25 Federal, State, and Local agencies, NGO and conservation groups that have conducted research and continuous monitoring in Great South Bay for decades. This entire section is so disparate of all the work that has been done regarding habitat protection, environmental monitoring and conservation ecology of Horseshoe Crabs along with a host of environmental parameters for ecological health conditions on Long Island, that this section requires a total rewrite and expansion. (CERCOM)

Response: Comment noted.

Comment #143: Page 49: Action 3.6.3 recommended increased protection and monitoring of Horseshoe Crab (HSC) populations. The efforts by CCE and NYSDEC have not been robust enough to offer a plan to reverse NYSDEC's "poor designation" of HSC protection identified by the ASMFC over the last three years ('19, '20, '21). A miniscule note of the "other efforts" to monitor HSC populations "are ongoing at Molloy College CERCOM." This statement totally ignores the most comprehensive monitoring program ongoing for 20 years by CERCOM/Molloy College at 115 locations on Long Island: from Brooklyn, Jamaica Bay to Montauk Point. (See map attached) An annual report identifying not only reduced breeding organisms per site, but as important, the decline in "breeding beach sites" at a considerably larger rate of decline. This entire action section requires a totally rewrite and inclusion of CERCOM's continued monitoring program of HSC's breeding sites and habitat suitability. A critical omission in the "Recommended Action" sections, regards the continual issuance of NYSDEC HSC permits to collect 135,000 animals a year and killed for bait. This total removal from the LI HSC breeding population is a significant impact unaddressed in this plan. A critical omission is reference to the USGS 2017 report, Long Island South Shore Estuary Reserve, Coordinated Water Resources Monitoring Strategy which is the only comprehensive document based upon the original CMP for the SSER completed in 2001. The baseline information of 2001 was contributed by USGS in the creation of the South Shore Estuary Reserve CMP and was updated in 2017. The USGS 2017 Report provides a guide for NYSDOS and the SSERG to properly update the CMP. This 2017 USGS report includes all research, existing monitoring, and data gaps for the SSER necessary for consideration to complete the present plan to form. Its omission is a major flaw and requires a significant revisit to this major report and its conclusions. (CERCOM)

Response: The spawning survey run by NYSDEC and CCE (long term sites now having 15 years of data) have produced statistical results which have been published in academic journals. This survey aids NYSDEC in making their management

changes to the commercial fishery as the spawning season occurs. NYSDEC utilized information from the NYSDEC/CCE spawning survey to develop the timing for the 5-day lunar closures which has been accepted by the Atlantic States Marine Fisheries Commission as additional management measures in response to the 2019 stock assessment which determined the New York Region horseshoe crab population to be in poor condition.

Chapter 4: Expand Public Use and Enjoyment of the Estuary

Culture/History

Comment #144: Page 57: About the estuary's bay houses (which we believe comprise an important cultural component of the estuary), we think it would be prudent for wastewater systems in these structures to be upgraded and that consideration be given to establishing wastewater upgrade requirements. Further, we suggest that the CMP seek to study and address wastewater upgrade needs within all island- and beach-based communities within the Preserve, as is being done on Fire Island. As sea levels rise, it will become increasing important to address wastewater issues within these communities before they impact human or ecological health. (Seatuck Environmental Association)

Response: Action 2.1.4 added to Outcome 2.1 of Chapter 2.

Recreation/Public Access

Comment #145: Page 63: Action 4.4.1, while we support the expansion of interpretive and educational opportunities at the south end of Bay Park, we oppose the idea of providing access to Pearsalls Hassock by constructing a pedestrian bridge. Pearsalls Hassock, like other marsh and dredge spoil islands in the estuary, provides a critical refuge for wildlife, especially birds. In places like the Western Bays, the islands are one of the few places where wildlife can escape the constant pressure of human activity and find suitable nesting habitat. Dredge spoil islands like Pearsalls will become even more important in the coming decades as rising seas increasing inundate low lying marsh islands. In fact, Seatuck has recently launched a project ("South Shore Re-Tern Project") that aims to help nesting colonies of terns and other shorebird species move to higher ground. In our opinion, it would be a mistake to provide regular human access to Pearsalls, one of the largest islands in the Western Bays, at precisely the time its ecological value is increasing. (Seatuck Environmental Association)

Response: Comment noted.

Comment #146: Page 55: Map 10; Consider adding local government protected land and private (eg TNC & PLT) or at least acknowledge that there is a ton more managed open space than what's shown on this map. (The Nature Conservancy, all comments following)

Response: Additional text added in paragraph 2 of "Overview" section in Chapter 4.

Comment #147: Page 56: Paragraph 1; “Development pressure and limited open space on the waterfront limit future additional public access.” Management activities on adjacent private land (e.g. Shoreline hardening) impact the quality of public lands

Response: Additional text added under Issues Faced “Shoreline Public Access and Recreation”

Comment #148: Page 56: Paragraph 2; Need to define public trust extend to the high tide line (which is changing due to sea level rise)

Response: Comment noted.

Comment #149: Page 56: Paragraph 3; “Projects that interfere with the public’s access to the foreshore or other access points protected under the public trust doctrine should not be undertaken.” What about ones that already do?

Response: Comment noted.

Comment #150: Page 58: Paragraph 2 “Improve Management of Shoreline Access”; Only a portion of these resulted in public access, and I thought GOSR didn’t do acquisitions in Nassau County??? Confirm this.

Response: The Governor’s Office of Storm Recovery completed acquisitions in Nassau County.

Comment #151: Page 58: Paragraph 5; “The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) has made improvements to parking areas at Jones Beach State Park and Captree State Park by installing green infrastructure practices to control stormwater.” What about the new Jones beach energy and nature center?

Response: Comment noted.

Comment #152: Page 58: “Connect the Community to the Waterfront;” Suffolk County is currently developing a blueway trail too.

Response: Text added under “Connect the Community to the Waterfront”.

Comment #153: Page 62: Action 4.2.1; This is a very specific action, surely there are other ways to protect public access, including the limitation of shoreline hardening.

Response: Comment noted.

Chapter 5: Sustain and Expand the Estuary-Related Economy

Boating

Comment #154: Page 72: “Outcome 5.4 - Enhance the Reserve Boating Experience,” Encourage seagrass awareness, promote best practices for boating in shallow areas, and consider installing conservation moorings in seagrass areas where boating and anchoring occur frequently. Consider adding evaluation of vessel use patterns in the SSER to identify boating hotspots that may conflict with conservation objectives to the list of research and monitoring implementation actions. (The Nature Conservancy)

Response: Action 3.2.2 added to Outcome 3.2. Action 5.4.2 added to Outcome 5.4.

Comment #155: Page 73: “Action 5.5.3: Study increasing ferry use as a connection to sites within the Reserve,” Could include water taxis? Tour boats? (The Nature Conservancy)

Response: Comment noted.

Tourism

Comment #156: Outcome 5.8: An additional Action is needed, promoting environmentally sustainable eco-tourism ventures, such as scuba diving, underwater photography, birding, wildlife watching, kayaking, canoeing, standup paddle boarding, and wind and kite surfing. (Town of Southampton)

Response: Action 5.8.2 added under Outcome 5.8.

Comment #157: Page 74: “Action 5.8.4: Prepare and distribute a tourism brochure and recreation map,” recommend digital approach. (The Nature Conservancy)

Response: Comment noted.

Fishing/Shellfishing

Comment #158: Page 67 needs to be updated to note that populations of bay scallops have also been declining over the past several decades with notable die-offs occurring in 2019, 2020 and 2021. (Town of Southampton)

Response: Text added under section “Fishing”.

Comment #159: Page 67: “Fishing;” Re: the clam population. The decline was most drastic during the 80’s-90’s. The past decade or so has stabilized to very low levels, and recently has begun to increase in areas along the South Shore, though still low compared to historic levels. (The Nature Conservancy)

- Re: oysters; This doesn't seem relevant to the fishing section unless there's directed efforts of stocking oysters for 'wild' harvest.

Response: Text added under section "Fishing".

Comment #160: Page 71: "Action 5.1.5: Explore the feasibility of developing a campaign to promote local New York seafood." This already exists at both Sea Grant and Cornell Cooperative Extension -just support those efforts. Also a Suffolk County group exists. (The Nature Conservancy)

Response: Action 5.1.5 updated to reflect the existing programs.

Comment #161: Page 71: "Outcome 5.2 – Address Commercial Fishing Issues Specific to the Finfish, Mollusk, Arthropod or Algae Fisheries." How about development of some guidance for leasing programs that builds on the lessons of long-standing programs (e.g. SCALP in the Peconic). These programs are great, but could have potential to create use conflicts and/or environmental impacts if they are not managed carefully. (The Nature Conservancy)

Response: Comment noted.

Comment #162: Page 72: Action 5.2.3; Feasibility needs to include market feasibility as well, same for oyster farms as well. (The Nature Conservancy)

Response: Comment included in Action 5.2.3.

Comment #163: Page 72: "Outcome 5.3 – Advance the Recreational Fishing Industry within the Reserve." Could add an outcome on increasing public access for shore-based fishing, it could be connected to removing vulnerable structures from properties that can then be made available for public access. (The Nature Conservancy)

Response: Comment noted.

Resilience

Comment #164: Page 67: "Addressing Impacts from Superstorm Sandy;" "However, the effects of Superstorm Sandy dramatically reduced property values for commercial and non-commercial real estate and businesses in the Reserve and created considerable pressure for shorefront properties to elevate or be faced with additional costs in flood insurance." This really is a function of the market as buyers understand risk and the costs to mitigate that risk. (The Nature Conservancy)

- "Going forward, individual actions and community measures related to rebuilding for a more resilient coast will affect the character and future economic conditions of the communities within the Reserve." Reference to the resilience section?

Response: Comment noted.

Comment #165: Page 71: Action 5.1.1; "…availability for development or redevelopment…" Include something related to smart planning and development. (The Nature Conservancy)

Response: Comment noted.

Chapter 6: Resilience

Resilience

Comment #166: Page 76: Overview, paragraph 4; "Resilience is not a new concept, but it has been more fully embraced after Hurricane Katrina (2005)." Irrelevant, leave out. (The Nature Conservancy)

Response: Sentence identified on page 76 removed.

Comment #167: Page 79: Figure 2; This plot could be improved by separating or distinguishing the 'natural' land cover from the 'built' landcover types. Or link them together so that you can see what land types in 2001 converted to what land cover types in 2010. (The Nature Conservancy)

Response: Comment noted.

Comment #168: Page 80: "Resilience;" "…and the establishment of a Community Preservation Fund (CPF) within the Reserve." In East Hampton and Southampton. (The Nature Conservancy)

Response: Possible Community Preservation Fund for the SSER addressed in Action 2.1.2 edited to reflects Comment #54 and Comment #168.

Dam Removal

Comment #169: Balance dam removal recommendations with community historical perspective: The Draft CMP states (page 25), "Any efforts to manage and restore these waterbodies should first consider opportunities for dam removal." Dam removal must be balanced with community input and historical perspective. Many communities on Long Island were established surrounding lakes that were created by dams, whereas removing the dam would significantly alter the community character and sense of place for those residents. (Citizens Campaign for the Environment)

Response: Text added to Action 2.4.5.

Sea Level Rise/Flooding

Comment #170: The CMP does not mention the recent adoption of the Fire Island to Montauk Plan (FIMP), the $1.5 billion barrier island shoreline protection plan for Fire Island and other areas along the ocean, including several projects to address bayside erosion. While no one is confident that the FIMP projects will prevent the consequences of inexorable sea level rise on the Reserve area, these efforts do provide a 20-30 year window to allow all stakeholders to develop strategies for mitigation, adaptation, and/or retreat where necessary. (Fire Island Association)

Response: The FIMP plan is identified on page 87 in the "Current Efforts to Address the Issues" section and has been updated to reflect the recent approval to move forward with the project.

Comment #171: Action 6.5: The CMP needs to encourage the elevation of homes on pilings in areas, which have localized risks of property damage due to advancing tidal regimes and erosion, but which may be outside of FEMA designated VE, AE and Limit of Moderate Wave Action flood zones, in order to limit the potential for future storm damage and avoid the need for shore armor. (Town of Southampton)

Response: Comment #171 addressed with Action 6.5.6

Comment #172: Page 76: Overview, paragraph 1; "…greatly increases the risk of flooding, erosion and storm surge damage, all of which will be exacerbated by projected sea level rise." Greatly increases the potential for human impacts and property damage from flooding, erosion, and storm surge, all of which are exacerbated by sea level rise. [it's important to refer to it this way b/c flooding and erosion are not bad in and of themselves, it's just when people and our stuff are in the way that it's a problem]. (The Nature Conservancy)

Response: Text added in Chapter 6 "Overview"

Comment #173: Page 76: Overview, paragraph 2; “As evidenced by Superstorm Sandy recovery efforts, many communities prioritized investigations into drainage and improvements for stormwater management.” I would leave this sentence out – the only thing this is evidence of is the fact that this is what they now how to deal with and already had plans for.

Response: Sentence removed from Chapter 6 “Overview”

Comment #174: Page 76: Overview, paragraph 3; “In designated flood zones, the alteration of natural drainage patterns from fill deposition has exacerbated flooding and increased risk to neighboring properties and structures.” While this is probably true technically, this impact is very small compared to other causes of flooding in this area – this is really something more applicable to a river system.

Response: Comment noted.

Comment #175: Page 76: “Issues Faced;” “…more days of extreme heat and a middle range sea level rise of 34 inches by 2100.” Why quote the middle range? Put the table in here, and acknowledge that current climate science indicates that the medium high and high levels are what we expect to see, if not worse.

Response: The middle range was identified based on the language in 6 NYCRR Part 490 - 'Medium projection'. The amount of sea-level rise that is about as likely as not (the mean of the 25th and 75th percentiles of ClimAID model outputs) to be exceeded by the specified time interval.

Comment #176: Page 77: “Sea level rise;” SLR is a massive impact to the user, it deserves a lot more than this tiny paragraph. Change “nuisance tidal flooding” to “chronic tidal flooding.”

Response: Text change made replacing “nuisance” with “chronic”.

Comment #177: Page 79: “At risk structures and properties;” Calling them historical implies its only super old structures, when it reality MOST buildings are not built even to current flood standards.

Response: Comment noted.

Comment #178: Page 81: Last paragraph; “Twenty-five parcels of wetlands in the Mastic/Shirley Conservation Area…” Update with more recent acquisitions? (The Nature Conservancy)

Response: The paragraph is focusing on the federal agency assistance with resiliency in the Reserve.

Comment #178: Additional acquisitions have taken place in this area through partnerships between the Town of Brookhaven and private organizations like the Nature Conservancy and Peconic Land Trust.

Response: The paragraph is focusing on the federal agency assistance with resiliency in the Reserve.

Comment #179: Update for latest FIMP plan: No restoration on the barrier island only Beach nourishment, no road raising

Response: Text on page 81 updated to reflect comment #179.

Comment #180: Page 85: "Outcome 6.4 – Resources and Tools to Assist Consideration of Flood Risk, Sea Level Rise and Other Natural Hazards are Available to Reserve Communities;" The header is good but the description is about work already done. This action should be about grants to minis for code and regulation updates. (The Nature Conservancy)

Response: Comment noted.

Comment #181: "Action 6.4.2: Support development of updated FEMA floodplain maps and encourage resilient land use planning measures;" The reserve is not going to do this, FEMA doesn't need or want SEER help. Better data exists for planning purposes, some it created by the state, SSER should just assure that it is used in planning. This action should be about supporting municipalities to do resiliency planning using the good &already available data (The Nature Conservancy)

Response: Comment noted.

Comment #182: "Action 6.4.3: Support research on local climate change projections (downscaled projections) or other adaption strategies;" Unnecessary, new ClimAID already underway.

Response: Comment noted.

Comment #183: Page 86: "Action 6.4.4: Assemble a record of regionally characteristic shoreline processes and storm or flooding events and correlate processes and events with shoreline areas;" Not clear what this does for us? (The Nature Conservancy)

Response: Comment noted.

Comment #184: "Outcome 6.5: Improved Measures for Addressing Upland Stormwater Quantity and Groundwater Flooding;" A lot of actions under here are not stormwater related, needs reorganizing.

Response: Comment noted.

Comment #185: "Action 6.5.2: Consider elevation of critical utility and wastewater infrastructure in areas of increasing groundwater level or flooding hazard;" Or removing those buildings all together.

Response: Comment noted.

Comment #186: Page 87: "Action 6.5.6: Encourage the elevation and floodproofing of homes on pilings, rather than concrete foundations, in flood zones;" No, this action is entirely insufficient. Raising houses is only one option and is only appropriate in areas where chronic flooding is not a problem now or in the next ??50 years, in the most vulnerable areas removing development and restoring the shorelines and habitat migration pathways needs to be incorporated as an option too. All This also requires support for community-based planning for how and where to do these different options. That's what SSER should support. (The Nature Conservancy)

Response: Comment noted.

Comment #187: "Action 6.6.2: Integrate CMP resilience issues with NYSDEC Climate Smart Community climate adaptation actions;" And advocate for a NY State climate adaptation plan.

Response: Comment noted.

Shorelines

Comment #188: Page 84: Outcome 6.3 needs to note that excessive use of bulkheads, revetments, rip-rap, gabions, and retaining walls degrade habitat and interfere with the landward migration of wetlands. (Town of Southampton)

Response: Comment #188 is addressed on page 92 under wetland barriers.

Comment #189: Page 77: "Physical Impacts from Storms;" "However, some coastal features (i.e., beaches and dunes) have historically recovered over time." Change to "however most coastal features can recover over time if left to do so." (The Nature Conservancy)

- Also insert after that sentence "Tidal wetlands may experience some edge erosion from storms, but they also relay on the sediment inputs from episodic storm events in order to grow in elevation and persist into the future. Tidal wetlands do not need to be protected from storms."
- "…although human intervention has precluded many breaches from becoming permanent inlets." Although human intervention on Long Island's south shore barrier islands has prevented breaches and overwashes, and refilled breaches that did occur. (do we know how long this has been going on?)

- "Ongoing studies on the Fire Island Wilderness breach preliminarily indicate that there are both positive and negative impacts from the barrier island breach." I am not aware of any truly negative impacts of the breach to the natural community. Has it actually been demonstrated that HABs worsened in the middle Bay because of the inlet? I don't think so. There may have been early speculation but I wouldn't include this here.

Response: Edits made under section "Physical impacts from storms"

Comment #190: Page 80: "Shoreline erosion management;" Start this section with: Erosion is a natural part of the dynamic sediment system in the SSER. Unfortunately, many structures have been built very close to the shoreline and are now threatened by this erosion. (The Nature Conservancy)

Response: Text added under "Shoreline erosion management"

Comment #191: "Much of the mainland shoreline in Nassau County is dominated by hardened structures87 (see Figure 3)." Is there a number on this? Even an old one?

Response: The total shoreline length in Nassau County is identified in Figure 3 under "Shoreline erosion management"

Comment #192: Page 80: "Increasing impervious surfaces;" "…approximately 1,500 acres from 2001-2010 within the Reserve." What is that in terms of a percent? This 1500 out of context doesn't mean much to people. (The Nature Conservancy)

Response: Additional data is not available.

Comment #193: Page 80: "Wetland barriers;" "Physical barriers, such as roads or bulkheads…" add "and undersized culverts that limit tidal exchange." (The Nature Conservancy)

Response: Text added under section "Wetland barriers"

Comment #193: Page 82: "Explanation of the Outcomes and Implementation Actions;" There needs to be a section below for restoration of floodplain habitats (including along rivers/creeks and coast), also protection of existing natural shoreline to prevent hardening and to prevent development in vulnerable areas. (The Nature Conservancy)

Response: Comment addressed in "Explanation of the Outcomes and Implementation Actions" Chapter 6.

Comment #194: "Planning within the Reserve should move beyond considering the current climate only and recognize that there <u>may be</u> a new normal where extreme events are more common." Not "may be" – recognize that the climate is changing, bringing higher temperatures, more extreme weather, and we level rise to the reserve.

Response: Comment addressed in "Explanation of the Outcomes and Implementation Actions" Chapter 6.

Climate Change

Comment #195: Page 77: "Issues Faced;" "There are certain issues that may be best addressed through greenhouse gas mitigation." Change this, there are not certain problems addressed with mitigation. GHG reduction and other mitigation activities are super important for addressing all climate impacts. Period. But also, we need to take action to adapt to the impacts we have now and will see in the future. 2 separate but both essential tracks.. Maybe say:– "It is essential for the health of the SSER that climate mitigation activities, like ghg reduction, take place to limit the impacts of climate change on the system. But it is also essential that SSER communities take action to adapt to the changes already occurring and those projected for the future." (The Nature Conservancy)

Response: Comment addressed in text under "Issues Faced" Chapter 6 Resiliency.

Comment #196: Page 77: "Climate change science is a developing field of study…" This paragraph needs some acknowledgement that while there is uncertainty in the exact timing of various impact levels, there is scientific consensus that the climate is warming and sea level is rising. (The Nature Conservancy)

Response: Comment noted.

Comment #197: Page 79: "More intense rainfall events;" These examples are places where this is already happening. This impact will cover much of the south shore as conditions worsen. (The Nature Conservancy)

Response: Comment noted.

Monitoring

Comment #198: Page 83: "Action 6.1.1: Develop a Natural Resource Inventory;" I'm not convinced this is a critical step, especially for resilience section. A vulnerability assessment would serve this purpose much better. (The Nature Conservancy)

Response: Comment noted.

Comment #199: "Action 6.1.2: Evaluate existing natural features for current condition and potential future extent;" Again, this has already been done, you don't need a whole action to pull together existing data, it could be done as a small piece of a vulnerability assessment.

Response: Comment noted.

Comment #200: "Action 6.1.3: Consider dam removal or modification that would restore natural and beneficial functions of floodplains and river systems;" Not just dams, also culverts – all types of road/rail crossing water bodies. This assessment has been largely done in Suffolk County by TNC and is underway in Nassau county by Seatuck. A fish passage evaluation has also been completed by Seatuck. A more important task is to implement the projects recommended by those inventories.

Response: Additional text added to Action 6.1.3.

Comment #201: "Action 6.2.1: Review existing estuary monitoring programs and identify additional monitoring needs;" Didn't USGS complete this already?

Response: Action 6.2.1 is referencing any additional needs required to address Resiliency.

Comment #202: Page 84: "Action 6.2.2: Identify resources and candidates to support, conduct, and oversee monitoring programs and data management;" No, this task needs to be START monitoring. (The Nature Conservancy)

Response: Comment noted.

Comment #203: "Outcome 6.3 – Shoreline Management Options are Understood and Appropriate Management Approaches are Applied;" These are all non actions. How about inventory shoreline hardening structures, ensure regulations incentivize best practice, support property owners who wish to remove bulkheads or design alternatives. The workshop is good.

Response: Comment noted.

Comment #204: "Action 6.3.3: Assemble case studies of successful restoration and use of nature-based features within the Reserve;" Instead of assembling case studies, how about support a few local demonstration projects.

Response: Comment noted.

Wastewater

Comment #205: Page 79: Here is another statement using the term "inadequate onsite wastewater disposal systems", without defining "inadequate": "Inadequate Onsite Wastewater Disposal Systems - Water quality in the Reserve is severely impacted by inadequate onsite wastewater disposal systems (i.e., septic systems and cesspools) which were not designed to remove nitrogen. As a result, excessive nitrogen enters the groundwater and upwells into the bays. Aging systems and rising groundwater levels due to sea level rise together increase the potential for hydrologic failure of the inadequate onsite systems, thereby posing the threat of pathogen pollution and further degradation of water quality. These impacts have far reaching consequences, which are discussed further in Chapter 2." It has already been established that pathogens from septic systems are

not a “threat” from properly operating septic systems. The only experience with pathogens escaping from septic systems is when the system hydraulically fails and wastewater overflows onto the ground. If this was to occur, it would be a violation of the sanitary code and corrective action would be required. Since none of the 360,000 existing septic systems have been analyzed for effluent quality, it is a mystery how the SSER Plan determined that the nitrogen in the effluent is “excessive”? As described in our report, An Independent Review of Nitrogen Removal Efficiencies, conditions for nitrogen removal are most conducive in the shoreline areas. As previously discussed, onsite septic systems do remove nitrogen and their designs promotes conditions for nitrogen removal as well as other contaminants. This SSER Plan statement appears fabricated to unduly vilify onsite systems; the only part that should remain is that “Aging systems and rising groundwater levels due to sea level rise together increase the potential for hydrologic failure of the inadequate onsite systems.” With such a statement it appears that the authors do not understand the nitrogen removal processes that naturally occur, especially in the riparian and hyporheic zones. The statement should be modified as suggested. (Royal Reynolds, graphic and table included in original submission)

Response: Inadequate onsite wastewater treatment systems are any cesspool or conventional Onsite Disposal System that is not designed to remove nitrogen and does not meet the requirement of Article 19 of the Suffolk County Sanitary Code.

Chapter 7: Increase Education, Outreach and Stewardship

Comment #206: Action 7.4.2: The development of a citizen scientist monitoring program, as recommended on page 98, needs to be coordinated with Peconic Estuary Partnership and Seatuck Environmental Associates, with attention also given to establishing a “Wildlife Monitoring Network”. (Town of Southampton)

Response: Additional text added to Action 7.4.2.

Comment #207: Action 7.5.2: The call for the establishment of a central source of information on environmental educational activities needs to be broadened to provide pamphlets, educational worksheets, and other curricula to be used by educators. Topics could include information regarding the food web, wetland values and benefits, dune formation, littoral drift/shoreline erosion, etc. Development of educational materials need to be age appropriate and sorted into various age groups, such as kindergarten through sixth (6th) grade, middle school, and high school. While the Town acknowledges that development of this data source is a large undertaking, SSER staff could coordinate their efforts with the Peconic Estuary Partnership, Long Island Sound Study, New York Sea Grant, and various other environmental groups. (Town of Southampton)

Response: Action 7.5.2 removed and edits made to Action 7.3.7.

Appendices:

Comment #208: Page 105: “New York State Funding Opportunities;” Consider adding the NYS Land Trust Alliance’s Conservation Partnership Program to support eelgrass conservation actions. NYLTA grants have supported community-based seagrass management work led by the H.L. Ferguson Museum on Fishers Island. (The Nature Conservancy)

Response: The available funding listed in the Comprehensive Management Plan is a reference to some of the possible opportunities available and does not represent all of the possible funding opportunities.

References:

Other:

Comment #209: Include section on Ocean Acidification: New York State established the Ocean Acidification Taskforce that is charged with providing a plan with recommendations and actions to locally address acidification impacts in our harbors, bays, estuaries, and ocean. The current CMP does not acknowledge acidification as an emerging concern in the SSER. The CMP should also provide information on the NYS taskforce. (Citizens Campaign for the Environment)

Response: Ocean acidification was added tin the “Current Efforts to Address the Issues” section. Ocean acidification is highlighted in the “Issues Faced” section under “Eutrophication, low dissolved oxygen and bay water acidification”.

Comment #210: Without the barrier islands on the southern border of the South Shore Estuary Reserve (SSER), there would be no estuary. The draft comprehensive plan does not differentiate between the mainland shoreline and the bayside borders of the barrier islands. And this omission is despite the fact that these shorelines are uniquely different and require different management strategies. In any edits of the current draft that are contemplated, FIA respectfully recommends a more comprehensive focus on the importance of the barrier islands to the sustainability of the SSER. (Fire Island Association)

Response: Comment noted. The recommendations of the Reserve’s Comprehensive Management Plan only extend to the Reserve boundaries. While we recognize the importance of the barrier island to the sustainability of the Reserve the ocean side of the barrier islands below the high tide line do not fall within the Reserve’s management area.

Comment #211: No mention of the role that Fire Island Association plays in promoting sustainability and stewardship of the barrier island. The FIA partners with local government and emergency responders in hurricane and storm preparation and mitigation, promotes and conserves the history of the barrier island and its communities, helps mainland governments coordinate and disseminate information to barrier island dwellers and visitors, is involved in cross bay transportation issues, and encourages preservation and protection of the barrier island resources, including marine and shore wildlife. The FIA would like to be recognized within the SSER, and hopefully be included by name on the Citizen Advisory Council of the SSER. (Fire Island Association)

Response: The FIA is recognized in Chapter 7 "Current Efforts to Address the Issues" under "Not for Profit organizations".

Comment #212: add Save The Great South Bay's Creek Defender Program: https://savethegreatsouthbay.org/our-work/the-creek-defender-program/ (Suffolk County)

Response: Text added to "Current Efforts to Address the Issues" in Chapter 2 Water Quality.

Comment #213: Links for SCCRI: https://cleanwaterforcarllsriver.com/ https://www.forgewatershedsewers.com/ (Suffolk County)

Response: Links added as references in endnotes.

General Comments

Comment #214: Pages vi, 4, 5, 12, 13, 19, 76 & 79: The SSER Plan uses the term "inadequate onsite wastewater treatment systems" no less than ten times in discussing the impacts of septic system wastewater on the estuary. This characterization of onsite wastewater treatment systems (OWTS) as being "inadequate" is problematic and is presented without definition or support. "Inadequacies" of OWTS or Onsite Septic Systems can include under-sizing, improper installation, improper use or failure to treat wastewater to a specific standard, or hydraulic failure due to clogging or groundwater intrusion. In most cases, the installation and hydraulic failure issues can be resolved by proper installation or replacement of the systems. In such situations, there is no need to install costly sewers or "advanced OWTS". However, in the case of determining the "inadequacy" of effluent quality from septic systems, the issues are obscured, because we do not definitively know the effluent quality from septic systems utilizing leaching pools; they have never been successfully tested (SWP 2020). The 2020 Subwatershed Wastewater Plan (SWP), which the SSER Plan references, estimates that there are over 360,000 existing onsite septic systems in Suffolk County. The majority of these existing systems use leaching pools as the "soil treatment unit" (STU). As we know, these types of STUs form biomats (biozones) similar to those of leaching fields. The importance of biomats has been recognized in numerous scientific studies, which we referenced in our 2021 report, An Independent Review of Nitrogen Removal Efficiencies. As discussed in the report, Suffolk County recognized the efficiency of conventional STUs to remove nitrogen and treat wastewater; however, did not consider or include them as an option in its wastewater disposal strategy. The routine use of the term "inadequate onsite wastewater treatment systems" is confusing and should be removed from the SSER Plan. (Royal Reynolds)

Response: Inadequate onsite wastewater treatment systems are any cesspool or conventional Onsite Disposal System that is not designed to remove nitrogen and does not meet the requirement of Article 19 of the Suffolk County Sanitary Code.

General:

Comment #215:Onsite septic systems contribute to poor water quality across the entire Reserve. That should be made clear throughout this document. (The Nature Conservancy)

Response: Comment noted.